

**BANK CREDIT
AND
AGRICULTURE**

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BANK CREDIT AND AGRICULTURE

UNDER THE
NATIONAL AND FEDERAL RESERVE BANKING SYSTEMS

BY
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TO
THE AMERICAN BANKER AND FARMER

PREFACE

The object of this book is to outline the conditions of the bank credit situation in relation to American agriculture under the National and Federal Reserve banking systems. It seems necessary to set forth briefly in Part I some of the short-term credit needs of agriculture, without special regard to any particular banking system or institution, except for the purposes of explanation and illustration. Part II will consist of a brief history and analysis of the short-term agricultural credit conditions under the national banking system with special consideration of the legal and economic restrictions, and the seasonal movements of currency. Part III will take up an investigation of the Federal Reserve System in relation to short-term agricultural credit. Consideration will be given to the provisions for short-term agricultural credit, and the ways in which the system has functioned in relation to agriculture, and the livestock industry.

It is not the purpose of this book to argue the case either for or against agriculture, but rather to analyze the needs for and conditions of short-term agricultural credit under the existing banking systems.

This volume is a simplified and condensed presentation of the bank credit section of research investigations conducted by the author into the problems of agricultural finance.

It is hoped that this book will meet a long-felt need for a thorough understanding of the relation between agriculture and the existing banking facilities. A large number of colleges and universities offer courses dealing with the problems of credit, banking and investments in relation to agriculture. These courses are variously named as "Rural credits," "Financing agriculture," and the like. This book covers the fundamentals and practices in financing agriculture in the United States and is intended to meet the urgent need of teachers and students of these problems. Bankers whose business is related to agri-

culture, the leaders of farmers' organizations who are always concerned with credit, and progressive farmers should also find this book useful.

For the benefit of the teacher who will use this book in a semester course of about eighteen weeks, a brief outline of the subject may be helpful. As an introduction to this course, the class which has not had an elementary course in money, credit and banking should first review thoroughly the chapters on credit and banking in their introductory principles of economics. The first two chapters of the book set forth the short-term and intermediate credit needs of agriculture, together with the problems involved. Chapters III and IV outline the relationship between the banking facilities of the country and agriculture up to the Federal Reserve Act. Chapter V aims to summarize the consequences of the legal and economic restrictions which handicapped the financing of agriculture before 1914. Chapters VI, VII, and VIII present the features of inelastic credit in relation to agriculture under the National Banking System; VI shows the rise and decline of call loan interest rates at the New York Stock Exchange as affected by the interior demands for currency for making and moving the crops; VII and VIII are outlines of the seasonal movements of currency between geographical districts and between the principal cities as affected by the demands for agriculture. Chapter IX begins the study of the Federal Reserve System with a summary of the economic and political reasons for the special provisions for agricultural credits. Chapter X aims to explain the provisions for agricultural credit under the Federal Reserve Act and their application. Chapters XI to XV, inclusive, attempt to show how the Federal Reserve System functions in relation to agriculture and especially how the volume of credit extended to agriculture necessarily varies with economic conditions. The seasonal movements of currency under the Federal Reserve System which are such an improvement over the old national banking system that it is almost unbelievable are explained in Chapter XVI by the transactions through the Gold Settlement Fund. Chapter XVII is a study of the rediscount rates under the Reserve System and a comparison of the rates for 60 to 90 days' paper and agricultural and livestock paper matur-

ing after 90 days. Chapter XVIII aims to show the causes for the variation in interest rates in different sections of the country. Chapter XIX outlines the use of the Federal Reserve System by the farmer and the country banker and suggest methods of improvement; in Chapter XX, the chief criticisms against the Federal Reserve System are summarized and analyzed in the light of sound economics; and Chapter XXI summarizes the conclusions drawn respecting the present banking facilities and agriculture.

The appendices set forth the fundamental principles of the bank credit facilities provided for agriculture in foreign countries; the mortgage credit facilities in the United States and foreign countries, and the work of the War Finance Corporation.

The author wishes to acknowledge his indebtedness to Dr. Allyn A. Young, Professor of Economics at Harvard University, for suggestions upon the plan of the original research; Dr. N. A. Weston and Dr. E. L. Bogart, Professors of Economics at the University of Illinois, and Dr. J. T. Holdsworth, Vice-president of the Bank of Pittsburg, N. A., former Dean of the School of Economics, University of Pittsburg, for reading the original research manuscript which afforded the material for a large portion of the body of this book. The author alone is responsible for errors.

IVAN WRIGHT.

URBANA, ILL.,
July, 1922.

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PART I

THE SHORT-TERM CREDIT NEEDS OF
AGRICULTURE

CHAPTER I

SHORT-TERM CREDIT

Short-term agricultural credit is that credit extended to farmers for producing and marketing farm products. Under ordinary circumstances, six months is ample time for this class of credit, and the greater portion of it is liquidated earlier. However, agriculture has other credit needs for periods of more than six months, which, for want of a better name, will be here called "intermediate credit." The time required for this line of credit is too long for commercial, and too short for investment banking. In the following pages, space will be given only to a brief discussion of the common needs for these classes of credit.

Purpose of Short-term Credit

The purposes of short-term agricultural credit are numerous. In brief, the most fundamental of these may be summarized as: making of seasonal improvements; buying and trading in seasonal stock; the buying of seasonal equipment; the hiring of labor; taking advantage of market fluctuations; defraying necessary running expenses; and the like.

The farmer, like any other business man, finds it difficult to keep a surplus fund sufficient to meet the current requirements of his business. If, when necessary, he can secure credit to keep his business going, he can increase his annual profits by doing a larger business and producing a larger stock of goods for trade. Agricultural short-term paper, the proceeds of which are used for producing more products, as the feeding of live stock, for manuring and fertilizing ground for crops, and for the hiring of labor, is the most useful service of credit. These are the uses of credit, which are really productive. The greatest service credit can do is to further the production of food, clothes and houses. Greater supplies of these necessities of life will make a more thriving commerce and trade, a more prosperous banking and credit business, and a happier and more contented people.

The use of short-term credit enables the farmer to produce greater supplies of necessary farm products. Short-term credit helps the farmer, like the business man, to seize opportunities and to increase his annual turnover.

Do farmers always use credit for these productive purposes? No, they do not. But, perhaps, they use more of their short-term credit for productive purposes than any other class of borrowers. However, the farmers' use of short-term credit is unlike that of other borrowers. The merchant uses credit to buy existing goods to sell in a definite market, the possibilities of which have been studied and rather definitely ascertained. The farmer uses his credit to take a chance on producing new goods to sell in world markets in competition with world production. If the farmer does not always use credit to further the technical production of goods, it is nothing against him. He often needs credit to tide him over emergencies, bad seasons, sudden price slumps, and various crises which are common to his business. But seldom will the farmer be found using borrowed money to carry on advertising campaigns, take summer vacations, or pay the bills of the holiday season.

How can the banker tell when a loan to a farmer is being used wisely? He cannot tell exactly, unless he is a prophet of unusual ability. But there are certain ear marks, which serve except in extraordinary cases. The loan may be desired to purchase some of the technical factors of production, as seed, fertilizers, tools, feed, live stock, and the like. In such cases, the loan is usually good business. But neither the banker nor the farmer know that the endeavor will be successful. Crop pests, diseases, storms, price declines, and endless other possibilities may reduce the value, or entirely wipe the security out of existence. The farmer may wish a loan to pay his taxes, rent or blacksmith's bill. All these are necessary, in order that the other steps in production may be continued, but the banker will have to use his judgment about the validity of such loans, which can only be based upon the farmer's general credit ability, his business habits, and his thrifty practices. If the farmer desires a loan to tide him over a bad season, or a period of low prices, it may be good business on the part of both the farmer and the banker; but this will depend on diverse circumstances, such as: the prospects of in-

mediate improvements in conditions, the farmer's record of success, and needs for credit by other productive interests in the community. The decision regarding the granting of farm loans should take into consideration, if it is to be most wisely made, the best interests of the community, and not alone those of the farmer and banker.

Seasonal Improvements

A farming business, like any other going concern, needs, from time to time, betterments and improvements. On the ordinary general farm there are annually drains to open up, ditches to make, roads to improve, buildings to remodel and paint, fences to rebuild, brush and weeds to cut, orchards and vineyards to prune, and machinery to be overhauled. No farmer can carry on his business successfully without annual expenditures of this sort. For these he needs current funds,—credit from three to six months, until he realizes some profit from his annual sales. Without the credit to perform these necessary tasks, his operations will be hampered, his annual profits curtailed, and the community less bountifully supplied with products from his farm.

Seasonal Stock

The farmer's business has seasonal demands which require considerable capital. For example, he may be able to feed or graze a herd of live stock for six months. But credit is required to get the live stock. This demand for credit has been so urgent in the Central and Western part of the United States that broad provisions have been made for it. Six-months agricultural paper, based upon live stock feeders, is now a commonly recognized commercial banking instrument, and is provided for in the Federal Reserve Banking Law. In the live stock centers of the country, special cattle loan banks have developed to handle this particular line of credit. The best example is the Clay Robinson Company of Chicago, with its branches in nearly every cattle-raising district of the country. Cattle credit is especially valuable for helping distribute the live stock to the farmers who have feed and are able to care for their animals. Cattle credit has a three-fold value; it helps to increase the beef production in the country; it enables the farmer to use his feed most economically, to increase the fertility of his soil and his capital

turnover; and it provides one of the most reliable short-term banking papers.

Another value of live stock credit to farmers is that feeders, grazers and young live stock can be bought best at certain times. Feeders can be purchased most advantageously in the fall, when heavy shipments are being made to market; grazers, in the spring, when poor feeders are dumped on the market, and in midsummer, when drought in some sections of the country compels the marketing of unfinished and immature animals. The farmer who has credit can get bargains by taking advantage of such opportunities for buying stock.

Seasonal Equipment

The expenditure on farms for equipment, especially needed at certain seasons, varies with the type of farming. A live stock feeder or a dairy farmer frequently needs to buy feeding stuffs in the fall and winter. In fact, most live stock farmers have occasion to draw upon their credit for this purpose. Crop farmers have especial need for seed and fertilizers in the spring; grain farmers, for binder twine and canvas, in midsummer, and autumn; fruit and vegetable farmers, for barrels, boxes, baskets, crates and hampers in the summer and fall, and for spray materials in the spring and summer. In these cases, where the farmer does not have ready cash, he should have no difficulty in securing short-term credit to carry out his productive operations, unless there is evidence that the expense will be greater than the value of the products. Since the seasonal equipment—seed, fertilizer and feed—are of fundamental importance in the production of the staple crops, each of these will be discussed separately.

Seed

The annual outlay for seed by farmers in the United States amounts to millions of dollars. Farmers are often compelled to restrict their crop acreage or use poor grade seed, because of the high price, and difficulty in obtaining good seed. This means limited crop production. Every banker and trader in the country knows that short crops from whatever cause mean curtailment in business. Only in recent years have bankers and business men realized that the advancement of credit to farmers, for

such purposes as buying seed, is a factor in furthering the prosperity of all. This fact was really appreciated during the World War. Banks, state legislatures, commercial houses, stores and local organizations throughout the country, made liberal provisions to supply the farmers' credit needs for the purchases of seed and other purposes. The most notable realization of the farmers' need for credit to purchase seed was the setting aside by President Wilson of \$5,000,000 out of the appropriation for the national security and defense under Act of Congress approved July 1, 1918; and such other funds as might be appropriated or made available from time to time were placed at the disposal of the Department of Agriculture for the purpose of granting seed-grain loans to farmers in the drought-stricken areas of the West.¹

These farmers had had two successive bad seasons, and were in great need. If the Government had not come to their rescue, with credit to buy seed, many would have been driven from their farms into other employment.

It is obvious that a farmer must have seed, or he cannot produce a crop. But why should a farmer have to borrow for this fundamental need, when it is such a small item for each farmer, and he knows that he has to provide for it annually? There is always a class of farmers who are compelled to sell their crops as soon as they are harvested, to pay their debts, and the next planting season finds them in debt.

Why loan to such farmers? They are necessary for the aggregate farm production and, in a general way, produce very good crops. No matter in what line of work these farmers were engaged, they would be found in the same condition. Their labor and character are their principal security. This class is comprised of a large number of renters, and particularly those in the communities where one crop is grown, such as cotton and wheat.

There are the well-to-do farmers, who keep their funds invested, and always expect to borrow for seasonal needs. This is a good business habit. Why should a farmer keep money idle from the time he markets his crop until the spring planting? Indeed, this has been practiced too much. The farmers have been compelled to do it for want of banking facilities and banking

¹ For complete information, see Treasury and Agricultural circulars 1 and 2, "Regulations Relative to Seed and Grain Loans for Spring Wheat Planting in 1919 in Drought-stricken Areas."

accommodations, and, as a result, they have been accused of hoarding cash and keeping it out of circulation. The banking system is responsible for this practice. Unless the farmers can get bank accommodations when they need them for their business, they are not going to reinvest their income until they have provided for their own productive needs. The money the farmer holds out of circulation, or from investment, from three to six months, awaiting the planting season, is a dead loss when considering its earning power to either the farmer or society. But why does not the farmer invest his income so that it will return for the seasonal needs of his own business? Just because investments cannot usually be made so that it is convenient to liquidate just when the farmer's business requires funds or when the planting season is right.

There is also the class of "hard luck farmers," who lost on the past season's crop, or had drought, famine or tornado destruction, for one or more seasons. This group is large in the far west, and familiar in other sections of the country. The best example of the magnitude and importance of these needs is the one already cited in this discussion of the drought-stricken areas of the west. Without seed loans, many of these farmers would have been unable to sow their fields, and the demand for food products is such that, even with the frequent crop failures, these lands are kept above the margin.

All these classes of farmers and others at times are obliged to demand accommodations of the nation's banking facilities, if they are to maintain their places and continue their part in the nation's production of farm products. Is it speculative? Any loan on farm products, to be produced, is speculative, and to these "ne'er-do-well" and "hard luck" classes it is most speculative. But these farmers seem to be necessary for the maintenance of the food supplies. They cannot grow crops without seed, and they cannot buy seed without cash or credit. Someone must take the risk, or sacrifice the agricultural production of these communities.

Fertilizers

At one time, almost within the memory of pioneers, fertilizers were rarely used by the common run of American farmers. This

was because the soil was rich, fertile and deep. The growing of crops required only planting and cultivation. Repeated crop production, without adding any new plant food to the soil, has exhausted the fertility of the once rich soil. This has made fertilizers essential. The proper directions for the buying and using of fertilizers are furnished farmers by the chemists and fertilizer experts of the State and Federal experiment stations. Years of experimenting with crops, soils, and fertilizers have furnished some very useful data showing the value of fertilizers in growing crops. Federal inspection and chemical analyses are sufficiently accurate to protect farmers against poor-grade fertilizers. But facilities to supply farmers with credit to obtain fertilizers when they really need them have not yet been adequately organized. The expenditure for fertilizers by American farmers is a startling sum, when accurately computed. The thirteenth Census shows that the total amount so expended in the decade 1900 to 1910 increased 115 per cent.² From 1910 to 1920 the increase was 184.1 per cent, according to the advanced report of the fourteenth Census. The amount of fertilizers used has decreased in recent years due to the depleted supplies and the enormously increased prices. The ratio of increase in the farmers' outlay for fertilizers has been much greater since 1910 than in the preceding decade.

A little study of the 1910 Census shows that in some sections of the country the purchase of fertilizer is as follows:

TABLE I.—GEOGRAPHICAL DISTRIBUTION OF FERTILIZERS

<i>Geographical Division</i>	<i>Per Cent of Farms</i>	<i>Value Used Annually</i>
North Atlantic States	58	\$27,630,000
South Atlantic States	69	59,629,000
North Central States, east of Mississippi River ...	19	8,059,000
South Central States	20	16,127,000

In one group, the outlay for fertilizers is even greater than the cash labor expenditure. This condition exists in the South Atlantic states, where a larger per cent of farmers use fertilizers than in any other section. Georgia has a percentage of

² Thirteenth Census, vol. vi, p. 561.

81, spending annually \$16,890,000. In Illinois, much less was reported; 4.4 per cent of farms spent \$66,000.³

This difference between sections becomes more conspicuous when the average acreage of improved land per farm is considered, together with the amount of fertilizer used per farm in the two sections. Thus, Georgia, with the average size of farm only 42 acres in improved land area, utilizes \$79 of fertilizer per year per farm, while Illinois, with 111 acre farms, uses only \$54 on each unit. This gives approximately \$2 expended per acre in Georgia, against \$0.50 per acre in Illinois.

The difference in the economic conditions of these two groups is also marked. The average Illinois farm, with a mortgage liability, has six times the value of the average Georgia farm, yet the latter's debt is one-fourth the former's. Also, Illinois' land is valued at \$95 an acre, Georgia's at \$13. From these few statistics, it is evident that the southern farmer has, proportionally, a greater need for credit to buy fertilizers than the farmer of the Middle West. Unfortunately, the lack of adequate credit facilities for this and other purposes, has forced upon the southern states a system of financing through which the local stores and fertilizer companies gain control over the crops.

The store credit system has been superseded by bank credit in the better communities, but, except where the buying of supplies by farmers is done through a coöperative union, the fertilizer companies still deal directly with the farmers, using the expensive crop-lien-credit system and the negotiable note, bearing an extortionate rate of interest. A county farmers' union of Kentucky stated in a letter (1920) that "the members buy fertilizers wholesale from 20 to 40 per cent cheaper than non-members retail, and the Union's note bears 5 to 7 per cent interest, whereas the non-member always pays 8 to 10 per cent interest." Accepting this statement, the coöperative buyer of fertilizers saves 20 to 40 per cent over the non-coöperative buyer, and about 3 per cent on interest rate, or a total of 23 to 43 per cent.

Perhaps no other southern state has a more thrifty people, or better credit conditions, than Kentucky. But if this is true in Kentucky, a survey of the other southern states would, undoubt-

³ Ibid.

edly, expose more glaringly the need for better short-term credit facilities for agriculture.

The outlay for fertilizers has become so large and the demand for credit to buy fertilizers so great, that many fertilizer companies make numerous sales to farmers on credit. In the opinion of the Federal Reserve Board, the farmer's six-months paper for commercial fertilizers is eligible for rediscount with the Federal Reserve Banks.⁴ The farmers realize that they can increase their crop production by the use of commercial fertilizers, and they need credit for the purchase of fertilizers until crops can be grown and marketed. The Federal Reserve System has not greatly helped the southern fertilizer credit situation, because the banking facilities of the South are not as adequate as those in other parts of the country, and the opinion of the Board offers little inducement for the banker to deal directly with the farmer. While the Board approves the discounting of the farmer's six-month notes for commercial fertilizers, it makes no provision for this note to be negotiated directly between the banker and farmer. In this case, the banker much prefers to discount the farmer's note after it has been accepted and indorsed by the local fertilizer agent. The Federal Reserve System, therefore, admirably aids the fertilizer dealer by discounting his farmers' notes; but this leaves the farmers at the discretion of the fertilizer agencies, and this matter is outside of the powers and functions of the Federal Reserve Board.

Feed

Live stock, dairy, and poultry farmers have the problem of buying feeding stuffs. Some grow a large portion of the feeds they need. Others depend on buying a part or all of them. Live stock breeders and feeders find it necessary to buy finishing feeding stuffs, as: cottonseed meal, oil cake, bran and grain feeds. Many depend on buying roughage, as hay and straw. Because of unfavorable seasons, those farmers who plan to grow most of their feeding stuffs are often compelled to buy. Dairymen almost universally buy protein feeds—corn oil meal, cottonseed meal, linseed oil meal, cocoanut oil meal, gluten feeds, wheat

⁴ The Federal Reserve Bulletin, June, 1915, p. 75. Informal Ruling of the Federal Reserve Board.

bran, oat feeds, and hominy feeds. Many of them depend on buying some roughage, as hay, straw, and fodder. Poultrymen invariably buy almost all their feeds. Farmers do not always have ready cash to buy these feeding stuffs, which are absolutely necessary; and as a result farmers frequently market immature and unfinished live stock for want of feed. Dairy men allow their dairies to run down, and sell a part of their herds, because of the high price of feeds, and the difficulty in securing credit for a reasonable length of time. In the winter, when hens do not lay, when feeds are high, and credit hard to get, it is a natural consequence for poultrymen to sell, and go out of business. No farmer should be compelled to go out of a food-producing business, or allow his business to depreciate, just for want of a few months' credit. A credit instrument could not have better security than a drove of beef steers or hogs, a flock of sheep, a herd of dairy cows, a flock of chickens, or a team of horses.

But why does not the farmer provide for these needs out of previous earnings? Some light will be thrown upon this question by asking, why do not all business men provide for working capital, emergencies, contingent expenses and the general upkeep of their business out of previous earnings? If all business men did this, banks would have no excuse for existence. The supplying of commercial credit for productive purposes is a banking function.

Then, why have not the banks provided for this phase of their business? Under the national banking system, the legal restrictions upon a bank organizing branches and note issue, prohibited the bank from reaching and serving the agricultural interests. The economic restrictions, as limited transportation and communication facilities, uncertain values and marketing conditions, disqualified the farmer as a first class bank customer; moreover, the small size of farmers' loans and the unbusiness-like habits of the farmers have been serious handicaps. The banks have generally had an ample outlet for their surplus funds, without catering to the agricultural classes.

But farming is a fundamental business. The merchants' and manufacturers' supplies would be cut off without the farmer's products; his buying power; and the exchange of raw products

between communities. The more products the farmers buy from and sell to other communities, the more prosperous will the local business be, and the more funds will pass through the local bank. Merchants and bankers cannot avoid prosperity in a prosperous community of farmers, and the farmer's prosperity is impossible without the service of the merchant and banker. The heart veins to the farmer's prosperity are the credit and market channels.

Labor

No other single item of expense in American farming requires so large a current outlay as labor. The planting, cultivating and harvesting of crops involves an expenditure of millions. Gardeners, crop farmers and fruit farmers are compelled to hire numbers of laborers for this work. If a farmer keeps one laborer all the year, at \$50 per month, the expense is \$600. Many farmers, as dairymen, live stock farmers, and poultrymen, have to keep help all the year. A farmer whose planting or harvesting costs him one thousand dollars should not be expected to have on hand sufficient ready cash, any more than a merchant who orders a bill of goods for a special season. The merchant will expect credit for a few weeks, until he has sold, at least, a portion of the goods. Just so the farmer should have credit for a few weeks until he can market his crop. But the laborer must have money. Therefore, the farmer should have credit at his bank for a few weeks. In nearly every such case, a promissory note will be sufficient for this credit. Realizing this need for credit, the Federal Reserve Board (1918) informally ruled that farmers' notes, the proceeds of which are used for tilling farms, are to be classified as agricultural paper, and eligible for rediscount at Federal Reserve Banks.⁵ The Census (1910) showed that the total amount expended by American farmers for labor had increased 82.3 per cent during that decade,⁶ and in 1920, 108.2 per cent during that later decade. In recent years, the wages of labor have more than doubled. No accurate figure is available, but at the harvesting season the

⁵ The Federal Reserve Bulletin, August, 1918, p. 743. Informal Ruling of the Federal Reserve Board.

⁶ Thirteenth Census, 1910, vol. vi, p. 560.

drain on current credit and cash is so heavy that the New York money market is affected by it for several weeks. S. S. Pratt (1912) states the situation well:

"An anxious period in the money-market is the crop-moving time. That is the period of the year when the grain crops of the West and the cotton crops of the South are being harvested and forwarded to the markets. When it is recalled that in 1910 there were nearly three and one-half billion bushels of corn, oats and wheat, and more than five billion pounds of cotton produced, some conception may be had of the service the banks of the country performed in financing the harvesting of these immense crops. Not all the burden of this falls on the New York banks, but a heavy share of it does, and it takes a large sum of money out of Wall Street in the last half of the year. This movement required shipments of currency, usually in bills of small denominations. The banks can send this money by express or registered mail, or by telegraphic transfers through the Sub-treasury. By depositing in the Sub-treasury the amounts required to be shipped, that institution will telegraph to another Sub-treasury to pay a similar amount to the bank which is to receive the currency in that city. This is the more convenient and the quickest way, but is restricted to Sub-treasury points.

"The crop-moving period often subjects Wall Street to a severe strain. The stock market has more than once suffered from this cause, and the Treasury has been called upon to afford relief by buying bonds, in order to liberate money held in the Treasury, and which can be got into circulation in no other way."⁷

Bankers liberally supply farmers with credit for harvesting crops. They have learned that business prosperity depends upon good crops properly harvested and marketed. Pratt says:

"When it is stated that the annual product of the farms of the United States amounts to over \$8,000,000,000, it becomes clear how basic to national prosperity is the yield of the principal crops; and cotton and wheat have a particular importance, because they are great export products.

"The three main sources of a nation's wealth are its mines, its agriculture, and its manufactures. The securities dealt in on the Exchange represent the mines, the crops and the products of the factories. If the mines are prolific, the crops bountiful, and the forges ablaze by

⁷ PRATT, S. S., "The Work of Wall Street," 1912, p. 309.

night and by day, the fact is reflected in the Stock Exchange transactions. Prices advance, sales increase, speculation is active. Wall Street, therefore, keeps its fingers constantly on the pulse of trade. The three principal crops are cotton, wheat and corn. The time was when 'cotton was king,' and a failure in the cotton crop spelled national disaster. Even now, a short cotton crop would be not only a severe blow to the South, but, also, inflict a loss that would be felt more or less all over the country. A failure in the corn or wheat crop has more than once been the forerunner of a commercial crisis." *

To analyze the farmer's need for funds to hire labor seems superfluous. Why does any entrepreneur need to borrow to pay labor? Labor cannot usually take products for hire, and products are not always ready for market when labor needs wages; furthermore, if products could be marketed at the moment wage funds are demanded, and if the products could be marketed upon notice, this would certainly not always be expedient. To carry this criticism to the point where farmers would not borrow, no matter how easy the funds were to obtain, brings up social problems of far-reaching importance and entirely out of the control of any one class, as farmers, bankers, or others. Year after year, apples rot under the trees of New York, Michigan, and Virginia; potatoes are never unearthed in Maine, Wisconsin, Minnesota, and Colorado; and corn falls back to the earth in Kansas and Missouri, while in the mining towns of Alabama and Tennessee, and in the slums of New York and Boston, thousands of families are being supported by gifts from charity, and thousands more are going hungry. The farmer will not hire labor to harvest and market these crops; because the cost would be more than the market value of the products, and no banker would extend credit for such an unthrifty practice, if he were cognizant of it. But this problem, while inevitably raised in this criticism, is outside the scope of this work.

In spite of these facts of national, and even world-wide, economic importance, it is not uncommon for farmers to curtail their plantings, and leave fields of ordinary crops unharvested, for want of labor and credit, although the undertaking would be justified if prices were the only consideration.

* Ibid., pp. 240-241.

Advantage of Market Fluctuations

There are times during the year when market conditions favor farmers in their buying and selling. In the fall, when heavy shipments to market are being made of live stock, grain and hay, farmers can buy cheaper. At this season, the prices are off a little, because the supply, at times, is greater than the demand. Farmers who buy live stock to feed, find they can go into the markets at these times and buy at lower prices than usual. Those who buy grains and other feeds will find these opportunities the most advantageous times to purchase. On the other hand, farmers who have live stock, grain or other products for market, will profit by holding them over dull or glutted market seasons. But the chief handicap to the farmer, in controlling his own market practices, is the lack of credit. No matter how lucrative the bargains which can be had in the market, if the farmer has not the purchasing power, he cannot take advantage of them. The farmer who has products to market is at the same disadvantage. The cotton farmer is a good example of this. He obtains funds on a crop lien to produce the crop, which lien must be paid at a certain time, usually shortly after the harvesting season. The crop must be sold to pay this lien, regardless of the price obtainable, or the conditions of the market. Grain farmers and some live stock farmers face the same difficult problem. A crop farmer must sell his crop and pay his note when it is due, and a live stock farmer must market his cattle and pay his six-months' paper promptly. This promptness is only good business policy, and should be insisted upon. But other means of credit should be available for farmers, so that they would not be compelled to sell at a temporary low price in order to pay the cost of production. The farmers' elevators and cotton and tobacco warehouses, together with the business methods of coöperative organizations, and the use of the trade acceptances, have helped, and will further help out, this agricultural credit need.

To question the farmer's right to credit, to hold and market his products in an orderly way, is to question the whole structure of our competitive society and class equality. From what other business enterprises are the products marketed annually, when they are finished, regardless of the price? The middleman and manufacturer have ample credit to store their products

and market them orderly. Why cannot the producers of the raw materials act in a similar way? They should, and this need will, undoubtedly, be met when the agricultural producing interests are organized in large units and are able to furnish adequate storage facilities, insurance and businesslike practices as other corporate enterprises.

Legitimate credit for the orderly marketing of farm products will steady prices. Farmers should not be compelled to sell as soon as their crops are harvested, because they have to pay labor, loans, and buy necessities. They should be able to place their products on the market in an orderly way when the price variation is not too far below normal. Thus, a general movement of products toward the consumer should be kept up, in contrast to the prevailing over-supplied market at one time, with prices below production costs, and at other periods an under-supplied market, causing an unreasonable upward movement of prices. And a common observation by agriculturists is that the period of ascending prices is always after the farmer has sold, and the advantage accrues to the middlemen who are able to hold the products.

The *New York Herald* says:

"Producers have listened to sermons about increasing production and satisfying the foreign demand as a means of cutting down taxes and keeping a balance on the right side of the ledger. There is more, more corn, more wheat. There are more textiles and more shoes than the country can consume, but there is only a restricted outlet for our surplus to the markets filled with eager buyers abroad. The interests of the country will be properly served if the surplus beyond our own needs are sold abroad on credit."⁹

This brings in a new phase of credit in marketing. In order to sell our surplus, we must extend credit to foreign countries. The War Finance Corporation was a government institution which "merely undertook to aid when American citizens wished to lend, for a term of months, their raw materials or finished products to European interests, to be paid for when these interests have been able to market these raw materials or finished

⁹ *New York Herald*, Dec. 3, 1920.

products.”¹⁰ And the *New York Commercial* says, “As a general principle, the Government should keep out of private banking business, but in an emergency where the welfare of so large a part of the community is involved, emergency measures should be adopted; by granting credit, America helps the farmer and a good customer (Europe) at the same time.”¹¹

However, in the meantime, shrewd British¹² traders were not asleep. They put into effect immediately their export credits scheme, whereby the Government has assisted in financing exports to the new states of Europe, and within a month the British Government extended that credit scheme so that aid was given up to 100 per cent of the cost of the exported articles, instead of 80 per cent, as formerly, and British goods are flowing into the territories where American goods cannot move at all. It is up to the United States to pass some national ruling whereby credit may be extended to foreign buyers of foodstuffs, for it is a vital need to take care of our surplus supply and thus keep us in equilibrium.

The Governor of the Federal Reserve Board¹³ stated that no banking business could stand the strain involved in lending heavily on crops withheld from the market indefinitely.

The *New York Times* replied that “the indicated remedy is not to help the farmers to hold their crops out of reach, but to help those who are willing to sell at market prices to trade with those who are willing to buy at market prices. This would tend to disprove the idea that the lending would be done for withholding produce from the market indefinitely.”¹⁴ The result would be a constant flow of payments through the year.

The Washington Wheat Growers’ Association¹⁵ is a non-profit coöperative association, organized for the purpose of marketing the wheat of its grower-members in the Pacific Northwest, without speculation or manipulation. During the great financial stringency of the winter of 1920-1921, this coöperative association found it necessary to provide a method for securing funds

¹⁰ *Baltimore Builder*, December, 1920.

¹¹ *New York Commercial*, Nov. 28, 1920.

¹² *Literary Digest*, Jan. 1, 1921, pp. 10-11.

¹³ *Ibid.*

¹⁴ *New York Times*, Dec. 10, 1920.

¹⁵ *Survey*, March 12, 1921, p. 857.

for its members. The result of this necessity was the issuance of commodity bonds under which the actual growers of the country have, for the first time, been able to finance themselves by direct contact with the investing public.

Under the specific contracts of the association, the growers were obliged to deliver their wheat to public warehouses or elevators. There they received the usual warehouse receipt, or grain tickets, specifying the quantity and grade of wheat. Then they drew ordinary drafts against the association for an agreed amount, ranging between \$1.00 and \$1.25 per bushel. The association accepted the draft. The grower then took the draft, secured by documents or the warehouse receipt, to his local bank and discounted it at the current discount rates. If the bank was not a member of the Federal Reserve System, it kept the paper, or sold it to its city correspondents, and in due course the drafts were paid or renewed. Most of the drafts were for ninety-day maturity. In some instances, they ran for six months, the limit allowed by law for paper rediscountable as agricultural paper through the Federal Reserve System. Where the drafts were discounted by members of the Federal Reserve System, the banks rediscounted the paper with the Federal Reserve Bank, and the paper moved into the usual channels for commercial paper.

As a whole, the country banks of the Northwest gave real support to the growers, and did everything within their power to help them minimize speculation. But in many counties, wheat is practically the only cash crop. All demands for money, therefore, come at one time, and some banks reached their rediscounting limit with the Federal Reserve Bank and could not secure adequate funds to lend to the growers in their districts. Nevertheless, it was vital to secure some money for the grower-members of the association, to enable them to pay off the costs of producing the wheat and the actual expenses of mere existence.

Geo. C. Jewett, the resourceful and far-sighted manager of the Washington Wheat Growers' Association, thereupon evolved the plan for the "wheat gold bond." He arranged for the issuance of \$500,000 in bonds dated Dec. 1, 1920, and payable June 1, 1921, bearing interest at the rate of 8 per cent per annum, signed by the Washington Wheat Growers' Association and the Idaho Wheat Growers' Association. These bonds were handed

over to the Lincoln Trust Company at Spokane, under an express trust agreement. The company agreed to deliver back to the Wheat Growers' Association \$1.00 in bonds for each bushel of wheat, upon the delivery to the company of the warehouse receipts or grain checks covering the wheat.

Thus, the trust company would deliver to the Washington Wheat Growers' Association \$10,000 in bonds, running in face value from \$100 to \$1,000, if the association would deposit with the company warehouse receipts covering at least \$10,000 in bushels of wheat.

Arrangements were made for protecting the bond holders in the event of any extraordinary decline in the value of the wheat, and indicated on the face of the bond. As wheat receipts were delivered to the trust company, bonds were delivered to the Wheat Growers' Association. The association then proceeded to sell the bonds and sold all of them at par, plus accrued interest. These sales were made to investors in and about Spokane. Then short-time bonds, each secured by a non-perishable commodity, appealed to the investors of eastern Washington as a safe security with far better interest than savings banks or other similar institutions could pay.

This bond is, perhaps, the wedge of a new financial system, under which the growers of the country can first exhaust the usual channels, and then tap the great resources of the investing public, directly and without the intervention of speculators, for the orderly merchandising of their crops. Bankers and experts on bonds and commercial paper have given unstinted praise to this new development. Commodity bonds, however, would be dangerous without stabilizing forces behind them, such as co-operative marketing associations. They would be unwise, with anything except non-perishable products of universal use and of constant current market demand.

The eastern investor has frequently taken millions and millions of dollars of short-time commercial paper, issued by the Chicago packers and other manufacturers with the general credit of the packers or manufacturers, behind them, and nothing more. These commodity bonds, each secured by specific non-perishable products, readily salable and universally used, should prove equally as desirable, both for yield and security, as any

short-time paper issued in the United States, except United States treasury certificates. In the opinion of students of co-operative marketing and coöperative financing, and especially in the judgment of H. G. Coykendall, one of the most successful coöperative managers on the Pacific Coast, the issuance of commodity bonds by the Washington Wheat Growers' Association is the most progressive point reached by the coöperative movement in the last three years.

The Washington Wheat Growers' Association seems to have struck the keynote of success for providing credit for marketing. Of course, variations in this plan would have to be adopted to meet local conditions and changing financial conditions, but the principles are sound. However, any such plan which may be adopted by farmers' organizations will need to guard absolutely against any radical indulgence into holding for higher prices. Holding for higher prices is just as foreign to a system of orderly marketing of crops as a forced system of marketing in too large a quantity, which unduly depresses prices.

Necessary Traveling Expenses

Looking back over agricultural history, we find that the farmers who stand out prominently have been travelers. English history affords the most worthy examples in the names of Jethro Tull, Thomas Coke and Robert Bakewell, to whom much credit is due for the great progress made in English agriculture in the eighteenth and nineteenth centuries. They studied the agricultural practices of the best farmers in England and on the Continent, and with their own knowledge applied them to advantage, obtaining fruitful results. Tull invented the corn drill and a harrow, and promulgated the principal theories of plant growth and soil fertility of his age; Coke is one of the best representatives of English farming on a big scale; Bakewell produced the Leicestershire sheep, and made great improvements in other breeds. So great were his improved breeds of sheep, that it was said England had two pounds of mutton, where she had had only one. He then turned his attention to cattle and horses, and made noteworthy improvements in the breeds.

Among the American farmers, those who stand out as leading examples have, invariably, been travelers. Peter Hopley of

Iowa, who started with nothing but health, energy and brains, and made himself a millionaire farmer, is an excellent illustration of a successful farmer who accomplishes much by traveling. Mr. Hopley attributes a great part of his success to the lessons he learned in traveling and studying farm practices elsewhere. He was a live stock farmer, raising horses principally. He traveled widely in America, visiting the best farmers and live stock shows, and every year, from 1884 until 1914 inclusive, he made one or two trips to Europe.¹⁶ Many farmers are barred from attending stock shows, fairs, experiment station farms and farmers' week at state agricultural colleges, for want of a little extra money at these particular times. No one would approve loaning farmers money with which to visit promiscuously, or to take summer vacations, but for such educational purposes as those enumerated, it would be a wise use of borrowed funds.

Circulating Capital Necessary

The purpose of the preceding paragraphs on short-term agricultural credit has been to show the farmer's need for current funds. A farmer who is running a successful business invests his funds in production capital. He does not keep money idle; no progressive business man does. A merchant who buys a new supply of goods is not expected to have ready cash to pay for them. Even a stock exchange broker who is speculating in securities usually pays at the time of purchase only ten to twenty per cent of the price, and, in most cases, that amount is borrowed money. No one would deny the need of credit for these commercial and speculative businesses. However, the need for credit to carry on the business of producing food and clothing is much greater. The principal uses for which agriculture needs current credit have been pointed out, and unless farmers can be allowed access to credit for these purposes, their full productive capacity cannot be exercised. No farmer can be expected to keep on hand \$10,000 to buy a herd of cattle feeders, or even a thousand dollars, to purchase fertilizers for his spring crops. The main purpose of the modern credit machinery is supposed to be to further useful production, including marketing. The modern

¹⁶ HOPLEY, PETER, "How I Made a Million Dollars Farming," 1918, *Farm and Fireside*, vol. 42, No. 2, pp. 5-18.

costs of production, and outlays involved, which are greater than the average farmer's ready purchasing power, make the use of credit as necessary as the land itself. This fact has been made much clearer to the American people, and especially financiers and business men, during the last few years of high prices. Comprehending this need, the draftees of the Federal Reserve Banking Law and members of the directing Board, made liberal provisions for agricultural and live stock paper, extending to the maximum of six months.

CHAPTER II

INTERMEDIATE CREDIT

Fixed Improvements

Modern farming requires a considerable outlay for improvements, such as clearing, fencing, buildings, drainage, irrigation, the setting of orchards, vineyards, and the like. In the United States, improvements needed vary in different sections of the country. In the dry regions of the West and Southwest, irrigation is the greatest need. The waste lands of northern Michigan, Wisconsin and Minnesota, and the cut-over timber lands of the Appalachian region, require clearing, fencing and buildings. The swamp lands of Virginia, Michigan, Ohio and Illinois require expensive drainage and liming. Each community has its special requirements, but wherever the location, the problem of maintenance is always present. For any of these improvements, unrecalable credit is the first prerequisite, because it will require several years for the increased income, due to the improvements, to earn the cost of the improvements. State banks and the mortgage banks remain the only alternative, and these banks are unable to handle more than a very small portion of this class of credit, because the state banks generally do not have the loanable funds and the mortgage banks find this class of small loans often too expensive for their organization to handle. Also, legal and economic restrictions in the nature of distance, lack of knowledge of the security, or a market for the paper, are often the obstructing factors.

What then is the need with regard to this intermediate credit and with what banking facilities is it to be met? The agricultural need is obvious; but the banking facilities are unadaptable. The national banks, before the Federal Reserve Act, were unable to handle any of this class of credit, except by illegal practices, because they were forbidden by law to loan on the security of real property; and the length of term was prohibitive. But

under the Federal Reserve Act, the national banks in agricultural communities are authorized to loan a limited amount on first mortgages on farm lands, not to exceed five years.

Will the banks use this privilege to take care of the credit needs for permanent agricultural improvements? No, they cannot. The banks are forbidden to accept a second mortgage and the farms that need permanent improvements the most, are mortgaged. This bars most of the national banks from meeting this need. Should the national banks handle this intermediate credit? That depends on the bank's ability, its location, the amount of this intermediate credit that is called for, and the credit demands for other purposes. A national bank should not loan too much for one purpose, and especially not for a purpose out of line with the general banking practices of the system. But that does not alter the fact that these are the acute intermediate credit needs of agriculture. The Federal Farm Loan System¹ cannot take care of this intermediate credit, because it is legally prohibited from accepting loans for a shorter period than five years, and, also, requires a first mortgage. Why could not this class of credit be handled by notes secured by the insured improvement, or some other property equal to the value of the notes under all ordinary conditions, and sold in the open discount market?

Obviously, the difficulty presents itself in the form of three more questions: Would the farmer always be able to pay when the note was due? Could the paper be standardized for market purposes? And who would invest in this paper? If the note is adequately secured, payment would be assured for all except extraordinary cases, which may occur in any business, and the farmer who is sensitive to his liabilities would provide for the payment. It might be argued that the farmer is not as sensitive about the payment of his debts as he should be, and much of this paper would not be liquidated when due, but would pile up in the market as "frozen" credit. Some of this would occur occasionally, as it does in any business. The farmer alone is not to blame. At times, conditions make it impossible for the best of customers to meet their obligations, but a credit system should be flexible enough to meet these emergencies.

¹ For a brief account of the Federal Farm Loan System see Appendix A.

Could the paper be standardized? The chief factor in standardizing paper is the security. Could not the paper for silos, drainage, irrigation, fencing, clearing, and the like, be secured just as uniformly as the paper based on live stock and movable capital? It would be more difficult to maintain the standard of security for the improvement paper because of the longer term, and this, perhaps, is one of the chief drawbacks to it. The other factors in the standardization of this class of paper seem too simple to be included in this analysis.

Who would buy this paper? Who buys any good class of short-term certificates? This class of paper would be sought for by that class of investors who are looking for short-term investments from one to five years, and who want paper which can be disposed of at any time, if necessary. This includes innumerable business houses, corporations, savings banks and trust companies, insurance companies and private enterprises.

Clearing

The larger portion of the farming lands of the United States is already cleared, yet there are large areas of uncleared and cut-over lands. These lands are in nearly every state, but large tracts of economic importance are in the Appalachian regions of the Carolinas, Tennessee, Kentucky, Virginia and West Virginia. Also, the regions in and about the Ozark Mountains contain large tracts of forest and cut-over lands. Virgin, cut-over and waste lands are abundant in most all of the Northern States, from Maine to Oregon. The cost of clearing lands will vary in different places. In Oregon, it was found by Messrs. Lewis and Vickers, in 1915, that the average cost of clearing land and setting with apple trees was about \$112.82 an acre.² At these rates, a considerable outlay is necessary where land is yet in the rugged state, and generally it will not be possible to complete the payment for clearing alone in one year. In the case of planting new land to orchard, as in Oregon, it will be, perhaps, under the best of conditions, five to eight years before any substantial income can be expected. Then, is not the length of time required prohibitive for the commercial banks? It is, except in cases where

² "The Economics of Apple Orchardng," by C. I. LEWIS and H. A. VICKER, 15th Oregon Station Bull., p. 3.

they have a surplus for investment. Perhaps the farm mortgage privilege of the member banks for a period of five years will take care of this need. But the difficulty is, where this need is really acute, the land is already mortgaged, and the member banks cannot accept any security but a first mortgage.

This eliminates the Federal Reserve banking system from this field of business, except in cases where the loan can be paid within six months. Renewals are provided for and loans are often made for six months, when the banker thoroughly understands that the farmer will not be able to pay for a year or more; but such cases are where the borrower is a well-known customer, and the bank has a surplus of loan funds. But this provides for only the unnecessary cases or, at most, not for the cases where credit is most needed, and certainly would not stand the test of any unusual or urgent conditions which really are the tests of a successful banking system.

This does not, however, mark the failure of the Federal Reserve banking system, but it does mark it as unable to satisfy this particular credit need. Maybe some of the long-term credit granting institutions can take care of this need. The Federal land banks are eliminated, because they cannot extend credit for less than five years. The mortgage banks and life insurance companies do not care for these short-term investments. State banks are generally scarce in the pioneer regions where this need is greatest, and loan funds are equally scarce in these regions; or the state banks are simply unable to meet these needs. Then the only solution left seems to be that of standardizing such paper, handling it through the banking system on its way to an open discount market for all paper.

Buildings

Home buildings and farm buildings for the protection of equipment and property are part of the initial outlay in starting a farming business. Where these fixtures already have been constructed, upkeep, improvements and additions require intermittent outlays. The amount to be sunk in these necessary fixtures is a business problem to be handled with judgment. The kind of buildings, the arrangement, and cost, will depend somewhat upon the farming operations to be carried on. Many farmers

have constructed expensive, fashionable home buildings and barns. Such buildings are often out of proportion to the income netted. Less expensive buildings would be just as comfortable and useful. However, necessary farm buildings require in any event a handsome outlay. The farmer should be able to construct necessary buildings with unrecallable capital, which he can repay by installments. The plan of the city building and loan association for enabling working men to build homes and pay by installments for a period of years, is an admirable plan, which could well be adopted in the construction of farm buildings. The financing of farm buildings is removed from the field of national banking operations; and there are no banking facilities to take care of these needs. What concern should the national system of banking have with this problem? Buildings are necessary productive equipment. Comfortable and serviceable home buildings are a stimulus to thrift and progress. The other farm buildings are a necessity for production. A live stock farmer needs silos and barns; a grain farmer, barns, bins and storage buildings; a fruit farmer, a packing house, a cold storage plant, and the like. No farmer can produce efficiently without these fixed capital equipments. The need is obvious, and further explanation seems superfluous, but how to satisfy this need is a complex question. These loans are too short for the investments of mortgage banks, life insurance companies, and the Federal land banks, and too long for the national banks. Could the savings departments of the national banks carry some such department, on the principles of the building and loan association plan, for this purpose? No, because the success of the national banks depends upon savings and deposits, and if these are used for another purpose, one of their banking principles will be destroyed. Also, where these kinds of loans are needed most, savings are least. This precludes any such plan. Then, the only solution seems to be something in addition to the present banking facilities. What will this something be? Short term notes, based upon insured improvements and perhaps other forms of collateral which are collected in large volume, standardized and sold in an open discount market, will go a long way toward completely satisfying this need.

Fencing

The problem of farm fencing is no longer one of brush and split rails, taken from the field itself by cheap labor. The modern high-priced labor, and expensive posts and wire, require considerable outlay. These are improvements that must be made, and the direct income from them is nil. On a new farm, fencing is a part of the initial outlay for starting business, and on an improved farm it is a part of the maintenance and extension expenses. In either case, it is an outlay from which immediate returns are not forthcoming, and the farmer must either have saved a surplus fund to make these improvements, or be allowed to pay for them out of surplus earnings, as they accrue.

Drainage

Large areas of farm lands in the United States require artificial drainage. This is expensive. The cost of draining farms in Michigan, Illinois and Ohio, in some cases, with which the writer is familiar, has run as high as an average of \$200.00 an acre. The majority of farms are drained much cheaper. John B. Shepherd, agricultural statistician for the state of New York, reported in April, 1921, that "nearly 20 per cent of the farm lands of the state was reported to be in need of artificial drainage. The amount of tile needed to put this land on a good business basis was estimated at 71 cents per rod for the tile, and 88 cents for the work." The advanced sheets of the 1920 Census show the total area in organized drainage enterprises in Illinois to be 4,011,330 acres, or 11.2 per cent of the total area of the state, and the cost of these organized drainage projects aggregates \$43,607,161. The area of land drained by private enterprises is unknown, but it is very large, perhaps more than that in organized drainage districts.

This type of fixed investments indicates another use of the savings of the agricultural classes, and also another reason for the small bank deposits in some agricultural communities. For the same reasons as stated above regarding other long-time developments, the national banks are disqualified to handle this type of credit in large amounts. There seems only one possible solution for this problem, viz., the organized districts can be

financed by short-term bonds, and the private enterprises by secured notes. The national banks could and should act as mediators and agents for both of these, and the discount market at the principal financial centers should care for this class of standardized paper. The Federal Reserve Board has informally ruled that "farmers' notes, the proceeds of which are used for tilling farms or for draining land already in use as farm land, should be classified as agricultural paper, and are eligible for rediscount."³ The drainage is considered incidental to the tillage, which it is. But this ruling covers only a small portion of the drainage credit in private enterprises; that is, only the paper maturing within six months. Perhaps the Federal Reserve Board knew the cost of drainage, and the extent of it in private enterprises; but this ruling skims out a negligible part of the aggregate, and leaves the larger portion for some other method of financing. Consequently, the local banker selects from the best class of this paper, what he wishes for his banking practices. But this results in unfairness to society. The local bankers handle what they can conveniently, select the best, and let the rest of society take care of itself.

Where the area to be drained is large enough, it can be financed best if a drainage district is formed and a mortgage bond issue floated. After examining the drainage laws of Illinois, Missouri, Arkansas, Mississippi, Michigan, and Louisiana, it is clear that the three principal methods followed in forming a drainage district are: Three or more land owners in a district; a majority of the land owners in a district; or the number owning the majority of land in a district, may petition the Circuit Court for the formation of a drainage district. The procedure varies in different states, but these three methods will cover most cases. Upon receipt of the petition, the court appoints an engineer who inspects the proposed district. Then, after due notification, a hearing is held, at which reasons for and against the drainage of the proposed district are considered. If the court finds it best to establish the drainage district, the organization is effected, and carried out, according to the state drainage law.

The usual method of financing a drainage district operation is on the same principle as that of most coöperative undertak-

³ Federal Reserve Board, Informal Ruling, August, 1918, p. 743,

ings; that is, the land owners pay in proportion to the benefits derived, as near as can be estimated. The payments are usually collected in the form of a tax. Generally, the banks can act in this matter only as agents, except in the cases where the loans are to be paid within six months; this would include a very small per cent of the total. The banks could, however, assist greatly in standardizing such paper and placing it on the market.

Irrigation

A vast expanse of arid land in the United States is valuable for agricultural purposes, when irrigated. According to the thirteenth Census, the total irrigated area in the United States was 13,739,499 acres.⁴ Of this, 6,258,401 acres were irrigated as individual and partnership enterprises; 4,646,039 acres, under coöperative enterprises.

The irrigated regions are largely in Utah, Wyoming, Idaho, California, Nevada, Colorado, Arizona and Montana. The scheme of irrigating had its origin among the Mormon colonies in Utah.

The coöperative projects are usually organized on the joint-stock plan. The capital stock is usually sold to members for so much labor. One share of stock has one vote. Then, the members are assessed a definite tax each year, in order to keep the project in operation. The stock, of course, is all owned by persons to be served by water rights. However, funds have been raised by subscribing capital, by direct assessment of the capital stock, by small loans, and by bonds. In some cases, settlers have coöperated in building works by their own labor. Some of the best examples of coöperative irrigation are to be found in the citrus groves of California.

In speaking of the plans and cost of irrigation, G. H. Powell, General Manager of the California Fruit Growers Exchange, says:

"Under some of the mutual companies in the fruit districts, it was originally intended to have one share of stock, with a par value of \$100.00, for each acre to be irrigated. As a rule, a share represented the equivalent of one-tenth miner's inch of water, flowing continuously;

⁴ Thirteenth Census, 1910.

although this varied to some extent. Sometimes, there were ten shares an acre, with par value of \$10.00, so the valuation for each acre and for each miner's inch was hardly sufficient for ten acres of mature citrus orchards, but that it was enough for seven or eight acres. Extra shares in water companies were purchased by orchardists, to provide the additional water needed for full-grown trees, so that the par value of an acre water right, based on present use, is about \$125.00. Under other companies, one miner's inch served only five acres from the start. The market value of shares is influenced by supply, demand, and various local conditions, as well as by the original cost; and acre rights are now valued at from \$100.00 to \$300.00 for citrus fruits." ⁵

Whether irrigation is carried on by the individual, partnership, or coöperative organization, the capital outlay required is considerable, and should be made with unrecallable funds, which may be paid up by annuities.

Orchards, Vineyards, and the Like

Fruit farming is one of the most important agricultural pursuits in some sections of the United States. Regions well-known for fruit growing are New York, Michigan, the Virginias, the Ozark regions, Washington, Oregon, Pennsylvania, Florida and California.

We have learned under irrigation that the cost of irrigating some citrus lands in California runs as high as \$100.00 to \$300.00 for the acre. Another factor that should be considered in this connection is the length of time which must elapse before a paying fruit crop can be expected. Irrigation and drainage are not factors in some fruit regions, but the time element is a factor in all fruit regions, and with all kinds of fruits. Of course, the time required before a young orchard bears fruit in paying quantities differs with the different fruits. Since the apple is "king of American fruits," we shall consider the time and capital elements involved in its production.

The expense for each acre of setting an orchard with two-year-old trees, say McIntoshes, would be considerable. It would include such items as: the price of the trees, labor, and incidental expenses. Also, expert labor must be employed, and care must be used in cultivating the trees for the following five to eight

⁵ POWELL, G. H., "Co-operation in Agriculture," 1915, p. 265.

years, before production in paying quantities can be expected. In the meantime, interest must be paid for the money invested in the land and the young orchard; taxes must be paid; spray materials and pruning tools bought; but no income can be realized direct from the orchard. Many fruit farmers, however, do make a substantial income from fillers and intercrops. That is, other fruits, as peaches, plums, pears, and cherries, are grown in between the rows of apple trees. Sometimes beans, peas, cabbages, corn, wheat, oats and other small crops are grown in a young orchard. Such use of the land until the orchard is of bearing age, helps to keep down the expenses and often yields a fair income.

One of the best statements of the actual money outlay for developing an apple orchard is that given by Professor M. C. Burritt for his own twelve-year-old apple orchard in New York State (1916). The rows are thirty-six feet each way, filled one way with plums and pears. Professor Burritt says, in part:

"On this seven and a half acre orchard, containing something over two hundred trees, we have spent, in the last twelve years, \$1,579.50, or \$208.93 an acre, including interest on valuation. We now value it at about \$225.00 an acre. We have secured a gross income from that piece of land of a little over \$1,438.55, or \$190.28 an acre, but it still owes us \$140.95, or \$18.66 an acre. In other words, after paying for all the labor, and five per cent interest on the capital invested in the land, we still lack nearly \$141.00 of breaking even, at twelve years. The total income was obtained from the orchard itself, from plum and pear fillers, and from intercrops.

"The \$208.93 total costs were made up of \$43.12 for man labor, \$27.20 for horse labor, and \$138.61 for materials and interest. The income from the orchard was \$807.53 from crops, or \$106.80 an acre for the twelve years; that is, a little less than \$10.00 an acre for each year, for crops. We charge the interest, taxes, and overhead charges all against the orchard; it is net, so far as the piece of land is concerned. From the plums and pears, we obtained \$415.44, and from the apples \$215.58, or about \$28.50 an acre."

The outlay required for developing an orchard will not be the same for any two communities, unless it is a mere coincidence. The necessary expenditure depends upon such factors as the price of land, interest rates, taxes, cost of labor, equip-

ment, working capital, climatic conditions, and the necessary preparation of the land. For example, in Oregon, it was found that the average cost of clearing land and planting with apple trees was about \$112.82 an acre; and the average costs for maintenance and development of a young orchard were: two to three years of age, \$62.72 an acre; four to five years, \$60.36; and six to seven years, less receipts, \$52.87 an acre.⁶ Also, it was found much less expensive to produce apples on large units than on small units.⁷ The average costs of producing apples in orchards six to nine years old, with an average yield of 120 bushels an acre, were: maintenance, \$30.71; overhead, \$57.03; handling, \$53.18; making a total of \$140.92. The average costs of production in apple orchards ten to eighteen years old, with an average yield of 233 boxes to an acre, were: maintenance, \$40.75; overhead, \$110.76; handling, \$68.99; making a total of \$220.60.

In the Wenatchee Valley, of Washington State, the costs of producing apples on 87 ranches in 1914 were found to be \$469.73 an acre, including the following items: labor cost, \$179.09; materials, \$103.71; and fixed costs, \$186.93. Materials include such items as box shooks, nails, paper, labels, spray material, manure, gasoline and oil. Fixed costs include such items as taxes, water tax, insurance, interest on investment, equipment charge, and packing house building charge.⁸

The same plan of investigation which was used in the Wenatchee Valley was applied in the Yakima Valley in 1915. Here, the average cost of producing apples for 120 farms was found to be \$345.68 an acre.⁹

The annual apple crop of the United States averaged 64,672,200 barrels (three-bushel barrels) for a period of twenty years, 1895 to 1915 inclusive. In 1910, the crop was much below normal; the estimate for the year was 47,213,000 barrels (three-bushel barrels). The total valuation of the crop for that year was estimated at \$134,273,772. In 1914, the apple crop was exceptionally good, the estimate was 84,400,000 barrels (three-

⁶ C. I. LEWIS and H. A. VICKERS, "The Economics of Apple Orcharding," 1915, Oregon.

⁷ Oregon Station Bull. 132, p. 3. Ibid., p. 3 and 4.

⁸ U. S. Dept. of Agr. Bull. 446, pp. 31-35.

⁹ U. S. Dept. of Agr. Bull. 446, pp. 69-74.

bushel barrels) with a total valuation of about \$156,984,000. The estimated annual production of commercial apples in barrels (three-bushel barrels) for the three years 1916, 1917 and 1918 was 25,091,000; 22,630,000; and 25,490,000, respectively. The total value of the apple crop (including both commercial and non-commercial) in the United States in 1918, was estimated at \$229,990,000.

With these few facts which have been given, setting forth the heavy outlays necessary for the development and running expenses of an apple orchard, it is obvious that, in modern times, only a few men can go into orcharding on a business basis without short-term and intermediate, as well as long-term mortgage credit. Also, when we observe the average annual apple production, the price value of the crop, and the importance of apples as a commercial product, there seems little reason why adequate credit facilities should not be made available for the production of a crop so valuable, staple, and necessary, as apples.

But our country has no adequate facilities for the financing not only of apple production, but of fruit production of any kind. The vast fruit-growing areas of apples, peaches, pears, plums, raisins, cherries, berries, oranges, and the like, in the United States are without adequate credit—and even long-term credit which is needed for development purposes.

The Federal Farm Loan Board has ruled that "on orchards, where the lands have no substantial value except for orchard purposes, no loans shall be made; that where the lands have a basic agricultural value, such value shall be made the basis for the loans; and that orchards shall not be regarded as permanent improvements, but shall be taken into consideration as enhancing the general value of the land and determining its productive value."¹⁰ What concern should member banks of the Federal Reserve system have with this sort of credit? Perhaps little, if any, except as agents and mediators for placing upon the discount market standardized paper based upon these securities. But at present they do not play that part, and there is neither machinery nor legal encouragement for it.

¹⁰ "Rulings and Regulations of the Federal Farm Loan Board," June 30, 1919, P. E.

Fixed Equipment

Some of the fixed equipment essential in farming operations cannot usually pay for itself in one season,—for example, tools, machinery, teams, breeding stock, dairy herd, and the like. These are necessary fixed investments. The use of this equipment, it is hoped, will result in increased profits for the producer. A year or more of such increased profit will enable the farmer to repay the funds expended for the original equipment. The problem is to finance the farmer, until he can make a turnover in his capital.

Tools and Machinery

Successful farming requires a large outlay in tools and machinery, as plows, harrows, cultivators, tractors, gas engines, wagons, trucks, mowing machines, hay racks, hay tedders, milking machines, cream separators, manure and lime spreaders, spray machinery, and the like. This equipment is necessary, and the farmer cannot succeed without such as is demanded by his business; but few farmers have the ready cash to buy it. The farmer needs credit that will allow him to pay for such equipment as the service of the equipment earns it; or if the outlay is small, he may pay out of his annual surplus and sacrifice some less-pressing need.

Teams

A good pair of farm horses and harnesses will cost from four to seven hundred dollars. A farmer who does not have a team must buy one. The needy farmer who does not have a team will probably not have the necessary money to purchase one for cash. Certainly, there ought to be some system of insurance and credit whereby a farmer needing a team and equipment for useful productive purposes, could purchase the same and pay for it out of his earnings.

Foundation Stock

A farmer who feeds live stock for six months, and then sells it, will have little need to worry about funds, if he has the feed. In most countries, ample banking provisions are made for this sort of paper. But to the farmer who desires to breed registered stock, or to run a dairy, the problem is different. For

either breeding or dairy purposes, permanent foundation stock is necessary. If such a prospective farmer is inexperienced, he should start with only a few animals and learn the business as he goes along. But the man experienced in handling breeding stock and in the dairy, as many American tenants' and farmers' sons are, should certainly not have to live through these years of slow accumulation, a hand-to-mouth existence. A proper system of credit and insurance should provide the necessary capital for such a man, and allow him to repay out of his annual earned surplus.

Credit Needs for Working Capital

The need for equipment, improvements, betterments, and working capital in modern American farming is obvious. These factors of production are necessary, in order that the farmer may get the best returns from the capital he already has invested. The rural community, including the banker and the merchant, will prosper in proportion to the value of the goods produced. But the outlay required to buy the factors of production has vastly increased in recent years.

The value of buildings on farms in 1910 was 62.3 per cent more than in 1900, and in 1920, 81.6 more than in 1910. Machinery and implements on farms increased in value 65.8 and 184.1 per cent; and the amount paid for fertilizers 115 and 184.1 per cent as reported by the Census.

TABLE II.—INDEX NUMBERS OF PRICES OF FARM PRODUCTS AND THE PRICES OF FARM EQUIPMENT.¹¹

1913 BASE 100.

<i>Date</i>	<i>Farm Products</i>	<i>Metal and Metal Products</i>	<i>Lumber and Building Materials</i>
1914	103	88	98
1915	106	94	94
1916	119	142	100
1917	212	174	134
Nov., 1918	221	188	164
" 1919	230	161	231
Feb., 1920	129	146	222

¹¹ U. S. Bureau of Labor Statistics.

Table II shows that the prices of metal products, lumber and building materials bought by the farmer increased in some cases far more than the price of farm products, and in some cases less, but these index numbers are ridiculously false. The prices of fertilizers and other farm products bought by the farmer are here shown by the wholesale city (buying) price, and do not include the wholesale and retail distribution costs which add, such as the expenses of advertising, storage, transportation, service, costs of marketing, commissions and profits; this will, in many cases, double the prices to the farmer over that shown by the index numbers. On the other hand, the prices of farm products are grossly misrepresented in the opposite direction; that is, the prices shown by the index number is far greater than the farmer receives. This index number is again based upon the city wholesale price, and not the price paid the farmer. Therefore, the relation between the price of the farmer's products and the things he must buy to carry on his business is grossly misrepresented by these index numbers.

The Federal Trade Commission found that the average percentage increase in the price paid by farmers for all farm implements was 2.2 per cent in 1915, 6.6 per cent in 1916, 21.6 per cent in 1917, and 32 per cent in 1918.¹²

But what has all this to do with the farmer's need for credit for equipment, improvements and betterments? It indicates the increased outlay necessary to carry on the business of producing farm products, and in this way indicates the farmer's need for credit. It also indicates the farmer's income, for the prices of his products are not increasing in proportion to the prices of the factors of production.

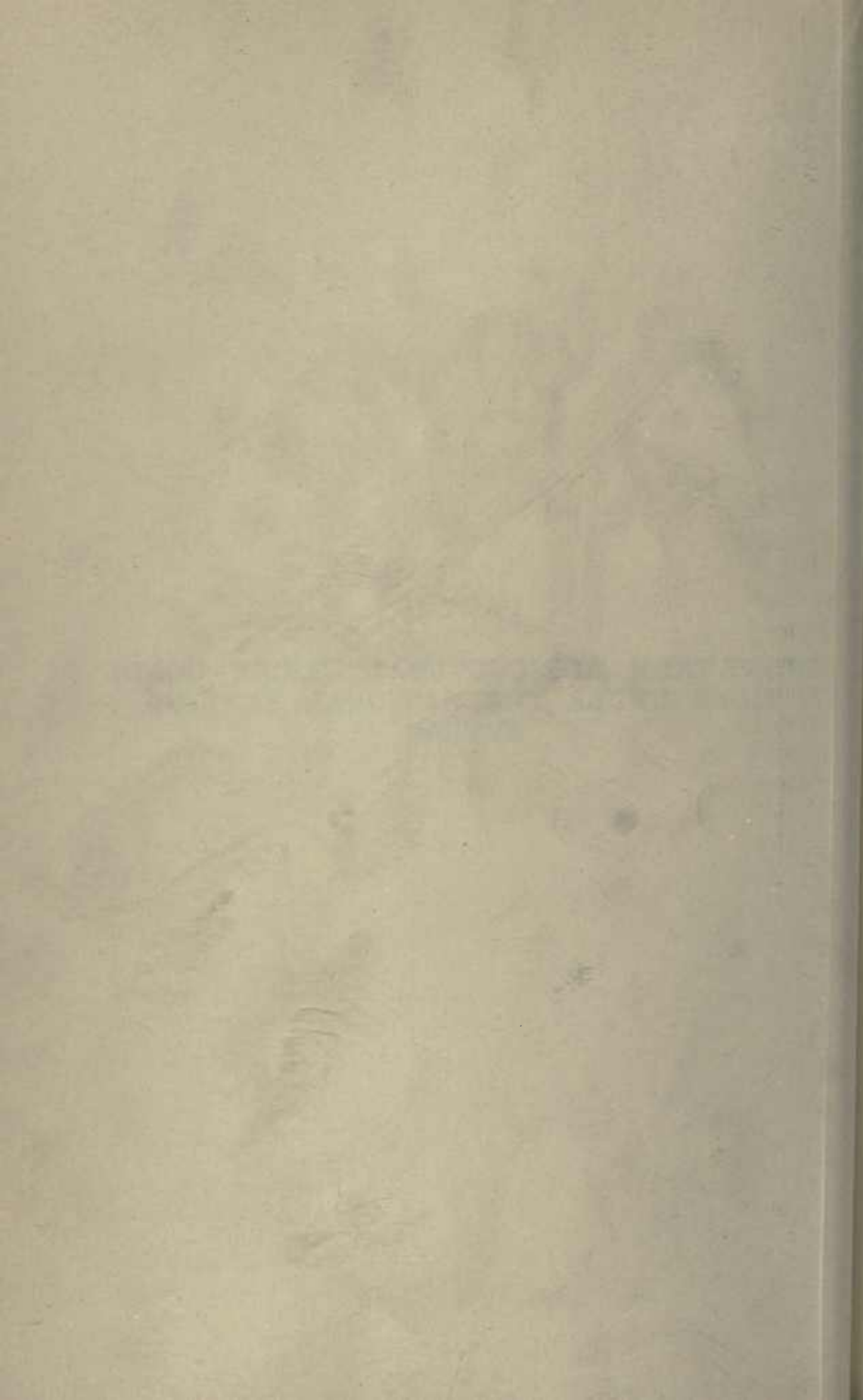
No figures can be obtained which will represent accurately the farmer's usual short-term credit needs during this decade. But the farmer is not alone in this. The credit uses of any active business for the period of rising prices is equally misrepresentative of its general credit needs. Because the price of farmers' products has declined below the costs of production, does not place farmers' notes in the list of the undesirable any more than

¹² Report on the Causes of High Prices of Farm Implements, by the Federal Trade Commission, 1920, p. 82.

those of the merchant or manufacturer. It is a perfectly normal thing, in a competitive society, for prices to change, and products to sell above or below the costs of production, and farm products are no exception.

PART II

SHORT-TERM AGRICULTURAL CREDIT CONDI-
TIONS UNDER THE NATIONAL BANKING
SYSTEM



CHAPTER III

EARLY DEVELOPMENT OF THE NATIONAL BANKING SYSTEM

Agricultural financing was not of sufficiently outstanding importance to call for special consideration in 1863. The financial problems of the Civil War and of commerce were of dominating importance. To meet these immediate needs, the National Banking Act was passed, for the two primary purposes of providing a market for United States bonds, and regulating the currency. The unsettled conditions of agriculture, the Government's unsatisfactory experience with its land credit policy, and the unsatisfactory experiences of rural banking schemes, offered sufficient excuse to warrant the elimination of agricultural credit from the national banking system. But, while no special provision was made under the Sherman Act for the financing of agriculture, at the same time there was no discrimination against agriculture. The Act was broad, general, and impartial, as a national monetary system should be. The Act provided that national banking associations "discount bills, notes, and other evidences of debts," "receive deposits," and "loan money on real and personal security."¹ These banking privileges are as applicable to agriculture as to commerce or industry. The national banking system did not prosper under the original law. Only sixty-six banks were organized in 1863.² The first charter was granted to the First National Bank of Philadelphia, July 20, 1863. Following this, several western banks received charters, but few were asked for by the banks of New York. In August, twenty banks were reported in process of organization.³

Financial interests, generally, did not feel friendly toward the new scheme of the Government. At a meeting of the bank officers of New York, December 5, 1863, a committee was appointed and instructed to "take into consideration the National

¹ The Sherman Act, approved Feb. 25, 1863.

² Report of the Comptroller of the Currency, 1863.

³ *Hunt's Merchants Magazine*, vol. 49, p. 139.

Bank Currency Act, as to its prospective effects upon the currency of the nation and the national credit, and what action, if any, devolves upon the banks in the premises." The committee reported "that from the fact that the applications were chiefly for banks with small capital and, judging by the localities where they were located, it was evident that the national law encouraged the organization of banks for circulation only, not regular business banks for deposits and discounts, but what are known in the western states by the expressive term 'wild-cat' banks.

"As the national currency was not a legal-tender between man and man, nor had any banking association or banking institution a legal right to pay them out in discharge of its debts to an individual or corporation, it would be a depreciated currency, and when used by the laboring man and poor woman, they would find five or ten per cent added to the price they would be required to pay, provided they could offer legal-tender notes; and it would, by its issue, supplant a like amount of legal-tender notes which the Government could issue free of all interest, and which amount the Government would have to borrow and pay interest on at six per cent. This loss on \$300,000,000 would amount annually to \$18,000,000." The report was accepted by the clearing-house.⁴ Such sentiment as this, expressed by the conservative banking interests of New York, was very influential in retarding the progress of the national system. While the committee's report contained some truth, it was, undoubtedly, prejudiced. Large national banks, as well as small ones, had been organized. National bank notes were as much a legal-tender as the state bank notes, and the former had the advantage of being receivable for public dues. The state bank notes profited only the stockholders of the banks, whereas the national bank and legal-tender notes benefited the Government and the people. Also, the latter banking system would regulate the currency for the public interests, whereas the former would strive for private gain. But the opposition of the banking interests, alone, did not restrain the growth of the national banking system: the law was defective, and steps were taken im-

⁴ Knox, J. J., "History of Banking," p. 100.

mediately to amend it. The Act, as amended, was approved June 3, 1864.

As finally amended, the main provisions of the Act were as follows: A separate bureau was to be established, and to be presided over by a "Comptroller of the Currency," to whom should be committed the charge of the "issue and regulation of a national currency based on United States bonds."⁵ The currency was to be issued by the "National Banking Associations," which could be organized by any number of persons, not less than five. In places of from 6,000 to 50,000 inhabitants, no bank with less than \$100,000 capital was to be organized, and in places of more than 50,000 inhabitants, none with less than \$200,000, and only in places of less than 6,000 were banks to be organized with \$50,000. Before being authorized to begin business, United States bonds must be transferred to the treasury equal to 30 per cent of the paid-in capital stock of the bank. In return, the bank received circulating notes to an amount equal to 90 per cent of the market value of the bonds transferred, but never exceeding the par of the capital stock paid in. This Act, also, required that before a bank could commence business, 50 per cent of the capital must be paid in, and the balance must be paid at the rate of one-fifth per month. The total issue of notes was not to exceed \$300,000,000, one-half to be apportioned to the banks according to the representative population of the states in which they were located, and one-half to be apportioned "having due regard to the existing banking capital resources and business of such state." The notes were to be redeemable in lawful money on demand, and were receivable in all payments to the United States, except for duties on imports. Share holders were doubly liable for the amount of their stock. Country banks were to keep on hand reserves equal to 15 per cent of their outstanding notes and deposits, with the privilege of redepositing three-fifths of this 15 per cent with other national banks in the reserve cities. The banks in these cities were to maintain a reserve equal to 25 per cent of their notes and deposits, with the privilege of redepositing one-half of such reserves in New York banks. All of the country banks were to redeem their notes at some one of the special reserve city banks, and all the

⁵ Acts 1863-1864, Statutes at Large, Sec. 1, p. 665.

reserve city banks at some bank in New York. State banks were permitted to enter the system by meeting certain requirements and regulations. Notes not exceeding one-sixth of the capital of the bank were allowed to be issued in denominations of one, two and three dollars, until the resumption of specie payments. National banks were permitted to loan money only upon personal security.

Under the revised National Banking and Currency Act of 1864, the banks were forbidden to take real estate, directly or indirectly, as original security for a loan. This restriction essentially converted national banks into commercial institutions, and discouraged the loaning upon security not readily convertible. National banks were granted permission to accept mortgages on real estate or real estate itself which might be conveyed to them by way of security for, or in satisfaction of debts, which had been previously contracted in good faith; or they could purchase the same at sales under judgments, decrees or mortgages held by them. But in no case were they allowed to hold real estate, whether under mortgage or otherwise, for a period of more than five years. National banks were never legally authorized to loan upon the security of improved farm lands until the passage of the Federal Reserve Act in 1913.

Like other long-term securities, farm mortgages were definitely excluded from the business of the national banking system. But this was not done with any idea of discrimination against agriculture. It was only the application of the banking principles which had been learned through many years of varied experience with banking projects. By this time, it was definitely known that commercial banking and long-term investments were inconsistent with the same institution. Experience had taught that the very nature of commercial banking forbids the investing of any considerable amount of capital in long-term securities not readily convertible. The national banks were essentially commercial banks, and must meet their daily demands; this restricted their major business to short-term credit, where quick turnovers are made, for example, by such as the business man or the merchant. But there is nothing in the Sherman Act, or the revised statutes of the United States, in relation to the national banks, which prohibits the banks extending short-term

credit to agriculture. Nevertheless, there were, at the time of the National Bank Act, differences inherent in the very nature of American agriculture and commerce which did not invite their coöperation in matters of banking. As agriculture in America has become more stabilized, many of these differences have been swept away, but the short-term agricultural credit, due to the slow turnover in agricultural business, and like natural characteristics, which cannot be changed to harmonize with mercantile practices, has generally been considered antagonistic to commercial banking.

In the earlier days, the mass of farmers were isolated from the banking community. Bad roads and poor traveling facilities made it difficult for the banker and the farmer to have the personal contact necessary for coöperation in business. The difficulty in obtaining accurate information regarding the farmer's business, mobility of the rural population, fluctuations in prices of agricultural products, and like uncertainties, made loans to farmers highly speculative. These factors, added to the length of term during which the farmers' business requires credit, and also the poor business practices of farmers, rather definitely excluded them from the services of commercial banks. The national banks were not only compelled by law to do a conservative business, but the number and location were so restricted by the requirements for organization, that they were generally able to find employment for their capital in the more bankable, more profitable, and less speculative business of merchants. The banker was also in position to be personally acquainted with his town and city customers; they were often members of the same church, clubs and societies, and met daily on the streets. Frequently, the banker was a partner in some of the local businesses, as: the mills, stores, or factories. This gave him an insight into their businesses and practices, and he knew quite definitely what credit he could wisely extend. On the other hand, the farmer was an unknown entity to the banker, who knew very little about him or his business. Neither could forecast accurately what the annual production might be, or the price of the products at market time; nor was there any commercial agency which the banker could consult to ascertain the solvency of the farmer, as in the case of the business man. Yet, the banker

could not raise the interest rate on the farmer to compensate him for the risk and slow turnover without devising some scheme to evade the usury law. The latter has frequently been practiced, but it has made the price of credit so exorbitant that the farmer could not afford to use it any more than absolutely necessary; and it subjected the banker to the criticisms of unfair dealings with, and discrimination against farmers.

Before 1900, the capital requirements for organizing national banks prevented their establishment in small towns and rural districts.

The requirements for organizing a national bank, and the restrictions on the note-issue privilege, prevented the system from penetrating into the agricultural districts and supplying them with short-term credit, even though the needs of agriculture had been as pressing as those of commerce. At this time, manufacturing and commercial interests dominated in cities with a population of six to fifty thousand people; and in towns of less than six thousand inhabitants, it is not likely that \$50,000 or more capital could be raised for organizing a national bank, when capital was so scarce, unless there were prospects which promised greater safety, quicker turnover and more profitable business than that of financing the production of farm products; which, when the transportation and marketing facilities of the country are considered, were already produced in super-abundance.

Thus, the very requirements for organizing a national bank, together with the fluctuating state of agriculture itself, drove the national banks to other fields of service. Also, other influences compelled the banks to be conservative. The East was recovering from the epidemics of "wild-cat" banking which had characterized the pioneer history of the banking business, but "wild-cat" schemes were still prevalent throughout the West and South. The report of the officers of the New York banks on the National Currency Act, in the autumn of 1863, and the acceptance of this report by the clearing house, already cited, was a complete suppression of any speculative motives which might have developed in the pioneer sections of the country.

The legislation surrounding the note issue privilege was one of the most rigid handicaps of the national banking system. It

has been observed that the issue of note circulation was conditioned upon the deposit of United States bonds equal to at least 30 per cent of the paid-in capital stock of the bank, and in no case could it exceed the capital stock. The maximum circulation had been fixed at \$300,000,000, and an effort had been made to apportion the circulation according to the population or the business needs of the country. All these requirements intensified the inelasticity of the circulation and the provisions therefor were soon found to be very unsatisfactory. March 3, 1865, Section 21 of the National Currency Act, which read "and at no time shall the total amount of such notes exceed the amount of its capital stock," was amended to read as follows: "And the amount of said circulating notes to be furnished each association shall be in proportion to its paid-up capital, as follows, and no more: To each association whose capital shall not exceed five hundred thousand dollars, 90 per cent of such capital; to each association whose capital exceeds five hundred thousand dollars, but does not exceed one million dollars, 80 per cent of such capital; to each association whose capital exceeds one million dollars but does not exceed three million dollars, 75 per cent of such capital; to each association whose capital exceeds three million dollars, 60 per cent of such capital. And that one hundred and fifty millions of dollars of the entire amount of circulating notes authorized to be issued shall be apportioned to the associations in the States, in the District of Columbia, and in the Territories, according to the representative population, and the remainder shall be apportioned by the Secretary of the Treasury among associations formed in the several States, in the District of Columbia, and in the Territories, having due regard to the existing banking capital, resources, and business of such States, Districts and Territories."⁶

The clauses of this Amendment restricting the note issue privileges of the larger banks were efforts to prevent the absorption by the city banks of more than their portion of the notes, and to enable the banks in the smaller centers to obtain their share. This apportionment of the notes "according to the representative population," and "with due regard to banking capital, resources, and business," had in view the proper distribution of

⁶ Act of March 3, 1865. 13 Statutes at Large, p. 498.

the notes, according to the country's needs. But all the good intentions expressed in this legislation overlooked two important facts. First, the total note issue privilege was inadequate. Second, the banks in the smaller cities, and in communities made up largely of an agricultural population, needed a portion of notes greater than this qualified apportionment would allow them, because their customers had not developed the use of deposit currency, as had been done in the larger cities. The rural classes were skeptical of checks. Not only did they pay for what they bought with currency, but they demanded currency for what they sold.

The National Banking and Currency Act was also amended March 3, 1865, providing "that every national banking association, state bank or state banking association, shall pay a tax of ten per cent on the amount of notes of any state bank or state banking association, paid out by them after the first day of July, 1866."⁷ This amendment was further amended July 13, 1866, and provided that the "*notes of any person, state bank or state banking association, used for circulation and paid out by them after the first day of August, 1866, shall be taxed, and such tax shall be assessed and paid in such manner as shall be prescribed by the Commissioner of Internal Revenue.*"⁸

An additional amendment to this clause March 26, 1867, broadened the provisions of the tax clause to include the notes of firms, associations, towns, cities and municipal corporations,⁹ and the tax was imposed on both the issuer of the notes and any person, bank or corporation paying them out.

This gave the national banks almost the entire control of the note issue field, and from this time on, they grew in popularity. But, as necessary and wise as the monopoly of the note issue privilege was for the progress of the national banking system, it was adverse to agriculture. The wide distribution of the state banks, and the liberal privilege of issuing notes which they had enjoyed, provided the necessary note currency in rural communities. But, when the state bank notes were taxed out of existence for the benefit of the national banking system, no ade-

⁷ 13 Statutes at Large, p. 469.

⁸ 14 Statutes at Large, Sec. 9, p. 98.

⁹ 15 Statutes at Large, Sec. 2, p. 6.

quate provisions were made for national bank notes to reach the communities which had been accommodated by state banks with a capital less than \$50,000. For national banks could not be organized with less than \$50,000 capital, and this minimum applied only to places with not more than 6,000 population. In 1863, there were 1,466 state banks with loans and discounts aggregating \$648,601,863, and circulation \$238,677,218,¹⁰ distributed geographically as follows:

TABLE III.—LOANS AND DISCOUNTS AND CIRCULATION OF STATE BANKS BY GEOGRAPHIC DIVISIONS, 1863 ¹¹

	<i>Loans and Discounts</i>	<i>Circulation</i>
Eastern States	\$216,341,927	\$65,516,155
Middle Western States	266,821,503	82,372,091
Southern States	79,282,290	39,558,760
Southwestern States	61,682,561	31,545,648
Western States	24,473,582	19,684,564

By 1868, the number of state banks had fallen to 247.¹² This decline in the number of state banks was due to the establishment of the national banking system, and the 10 per cent tax on state bank notes which virtually deprived them of their most profitable business. A large number of state banks converted into national banks. The Comptroller of the Currency reported in 1865 that 701 of the 1,601 national banks were converted state banks.¹³ By 1870, the number of state banks had begun to increase. (The writer is unable to obtain any information for the whole country earlier than 1873.) The number of state banks in the country in 1873 is not known, but the capital, loans and circulation of the state banks for this year are estimated at \$42,700,000, \$119,300,000, and \$110,800,000,¹⁴ respectively. These figures make an interesting comparison with the loans, discounts and circulation of 1863, presented in Table III. It might

¹⁰ Report of Comptroller of the Currency, 1876, pp. 94-95.

¹¹ *Ibid.*, pp. 91-92.

¹² State Banks and Trust Companies Since the Passage of the National Banking Act, by G. E. BARNETT, National Monetary Commission, 1911, p. 11.

¹³ Report of the Comptroller of the Currency, 1865.

¹⁴ KNOX, J. J., "History of Banking," p. 312.

be said that the national bank notes had taken the place of the state bank notes. True, they had increased in quantity, but they were not distributed throughout the country where needed, as the state bank issues had been, and were not even allotted according to the legal apportionment. "According to the new apportionment based on the wealth and population shown by the Census of 1870, the Eastern states were in excess to the amount of 70.6 millions, the Middle states 9.4 millions. The Southern and Southwestern states had 59.2 millions less than their due proportion, the Western 21.4 and the Pacific 7.9."¹⁵ This was the condition after the \$54,000,000 national bank notes authorized by the Act of July 12, 1870,¹⁶ had been taken up, and the withdrawal of \$25,000,000 of notes from states having more than their share, had been redistributed to states whose circulation was found deficient.¹⁷ The authorized note issues had been absorbed by the Eastern and Middle states. In the agricultural states, of the South and West, where deposit banking was less adaptable and notes were needed most, the legal allotment could not even be obtained. In spite of the provincial character of the state bank notes, they served the rural communities better than the national banks were able to do, with their standard notes.

The commercial needs of the country were primarily credit. The recuperation of domestic industry and trade from the destructions of the Civil War was in full swing. Speculation was flourishing, railroad construction in new territories was booming. The need for long-term investment funds was strenuous. The agricultural crops produced were over-abundant, compared with the country's financial and marketing facilities. The South and West had never been adequately supplied with banking facilities, while Wall Street seemed to be the center of gravity for all American money and credit, and the annual drain upon the money centers for the crop moving period was creating an annual plethora of funds in Wall Street. The situation was tersely described in the *Bankers' Magazine*, 1873, as follows:

"It is surprising, with such prospects for money, that capital concentrates here from the wilds of Maine, the recesses of Connecticut,

¹⁵ Report of the Indianapolis Monetary Commission, 1898, p. 204.

¹⁶ 16 Statutes at Large, p. 251.

¹⁷ Section 21 of the National Banking and Currency Act.

the prairies of the West, or the tobacco fields of the South, to be used at 1 and 2 per cent per month, instead of 6 per cent at home.

"Is it surprising that the bubble will burst occasionally, and drive into common ruin the speculators for a rise in stocks or for a corner in some great staple of commerce?

"We caution our country bankers to keep a healthy reserve at home, and not to trust too large a fund in Wall Street 'on call.'"¹⁸

Pressure was brought to bear until, in 1874, an important change was made in the National Banking System. The law was amended so that banks could reduce their bond deposits to \$50,000; and, if desirous of withdrawing circulation, their bonds might be released upon the deposit with the Comptroller of lawful money in sums not less than \$9,000, to cover outstanding circulation. This latter clause was important, in a negative way, for elasticity. It allowed the circulation to be reduced, at least. Also, the reduction of the required amount of bonds to \$50,000 lightened the burden of the banks, and relieved them of the unnecessary loss from funds locked up in bonds.¹⁹

The financial situation was, at this time, a troubled one. It had, unfortunately, become an important factor in the trend of political affairs. The panic of 1873 had made an acute money stringency and pressure was brought to bear for an increase in the volume of currency, which resulted in the proposed inflation bill of 1874, and which was vetoed by President Grant.

The most important legislation and that nearest approaching democracy in banking, was passed Jan. 14, 1875. This act provided for the resumption of specie payments after Jan. 1, 1879, and, among its most important provisions, it removed the absolute limit upon the issue of circulation by banks and the regulation for the apportionment and the distribution of notes. This marks the establishment of the "free banking system," subject to the supervision of the Comptroller alone, and not to the bond-deposit requirements.²⁰

The establishment of the free banking system gave more elasticity to the circulation. That is, it enabled any section of the

¹⁸ *The Bankers' Magazine*, May, 1873, p. 916.

¹⁹ Act of June 20, 1874. 18 Statutes at Large, 123.

²⁰ Act to Provide for the Resumption of Specie Payments, June 14, 1875. 18 Statutes at Large, 296.

country to provide bond-secured circulation for pressing needs. But there were so many other factors restraining the elasticity of the currency, that the productive needs of business and agriculture were not yet adequately met. Among the factors which held circulation in check were the rigid reserve requirements which encouraged the sending of the reserves to the New York "call" loan market for speculative purposes. The market price of bonds always fluctuated adversely to the demands for notes. Notwithstanding these influences, there has never been a time in the history of American agriculture when funds employed in commerce would not earn higher dividends. Yet, at this time, the need for short-term agricultural credit was not keenly felt, except in the crop moving season. Another fact which induced the development of the national banking system for commercial interests is, that, when the arteries of commerce are clogged, a distressed situation is soon created; whereas, when a season's crops are poor in one community, they can be supplied by the surplus of another, when commercial facilities are adequate.

Also, a nation takes pride in its commerce; it is one of the ostentatious ways of competing with other people, and it is more spectacular than agriculture. Commercial supremacy is looked upon with more pride than agriculture, and, in this country, the financial needs of commerce have brought it more obviously to the front.

It was believed that, under the Act of 1875, circulation would be greatly increased, but, owing to other conditions, principally the increased price of United States bonds, the actual happenings were reversed from what was expected. The circulation decreased, because of the inability of banks to issue notes at a profit. In 1875, the circulation of national bank notes was \$340,546,545, the following year the circulation decreased to \$316,289,025;²¹ then, an upward turn developed in the note issue, which reached its maximum of \$352,464,788 in 1882, somewhat relieving the currency stringency.²² Following which, came another decrease in circulation, which reached bottom in 1891, with a circulation of bank notes of \$162,211,046. The first decrease

²¹ Estimated amount of money in circulation in the United States at the close of each fiscal year from 1860 to 1897 inclusive. Finance reports of the Secretary of the Treasury, 1897, pp. cxxxi-cxxxviii.

²² Ibid.

was checked in 1876, by Congress forbidding further retirement. This was merely catering to the demands of the inflationists.

The increase was, for the most part, due to the circulation withdrawn by new banks. These banks were, in part, the conversion of gold banks, authorized under earlier Acts, into national banks, as provided by the Act of Feb. 14, 1880.²³ By the Act of July 12, 1882, banks with \$150,000 or less capital were authorized to withdraw bonds down to an amount equal to one-fourth of such capital, by the deposit of lawful money.²⁴ However, not more than \$3,000,000 of notes were to be retired in any one month. In exchange for the outstanding 3½ per cent bonds, 3 per cent bonds were to be issued. As shown by the Comptroller's reports, many of the banks not only took advantage of the provisions to cease issuing notes without profit, but many left the national system, and reorganized as state banks.

Notwithstanding these facts, the capital of the national banks steadily increased until, in 1890, the capital of the banks in the system was \$650,477,235.²⁵ This capital is not large for a national banking system, considering the progress of the country and the accumulation of wealth which had taken place; but it does show some expansion from the earlier period. Because of the slow growth, the contraction of the note issue, the movement of the reserves toward the New York "call" loan market, and the conservatism which characterized the national banking system, it goes without saying that the banks did well to meet their commercial obligations as they did, without entering into the less profitable and more speculative field of financing agriculture.

Other forces were at work to wreck the financial machinery. Among the most noticeable factors were the demands for free silver on the part of the cheap money theorists, which led to the enactment of the Bland-Allison Law of 1878,²⁶ and the Sherman Act of 1890.²⁷ The Bland-Allison Act required that the Treasury Department purchase not less than two, nor more than four million dollars' worth of silver bullion a month, and to coin it into standard silver dollars, which were made legal tender.

²³ 21 Statutes at Large, p. 66.

²⁴ *Ibid.*, 22, p. 162.

²⁵ Finance Reports of the Secretary-Treasurer, 1897.

²⁶ 20 Statutes at Large, p. 25.

²⁷ 26 Statutes at Large, p. 289.

The Act provided for the deposit of silver dollars with the Treasury, and the issue therefor of silver certificates redeemable on demand in dollars. Under this Act, some 25,000,000 silver dollars were coined each successive year for twelve years. The Sherman Act required the Secretary of the Treasury to purchase monthly 4,500,000 ounces of silver at the market price and to pay for it by the issue of Treasury notes. But the important point was, that these notes were made full legal tender, and were redeemable in gold or silver coin at the discretion of the Secretary of the Treasury. This movement cheapened the gold dollar and drove it into countries where its purchasing power was greater. During the first eight months of 1890, the total gold shipments amounted to more than \$75,000,000, net. Deposits fell off greatly, and the demand from the country banks was greater than usual. The clearing-houses of New York, Boston and Philadelphia came to the rescue, and issued clearing-house loan certificates. This, apparently, saved the day and diverted a panic in 1890. But the gold exports continued, and the only thing that saved the commercial and financial interests from a panic in 1892, was the abnormal production of American agriculture. During this year, the exports of domestic agricultural products from the United States ran up to the value of \$803,122,045, nearly two hundred million dollars more than in any preceding year. This relieved our foreign trade situation; but the relief was short-lived. The panic was inevitable, and came with a crash in 1893. Since this panic, the national banks have had many failures, and general dissatisfaction has been expressed with our financial system.

In 1897, the Indianapolis Monetary Commission carried through an investigation according to the request of the Indianapolis Monetary Convention of Jan. 15, 1897, "To make a thorough investigation of the monetary affairs and needs of the country in all relations and respects, and to make proper suggestions as to the existing evils, and the remedies therefor." The principle upon which the investigation was based, was that adopted in the resolution of the Indianapolis Monetary Commission, declaring "that it has become absolutely necessary that a consistent, straightforward and deliberately planned monetary system shall be inaugurated, the fundamental basis of which should be: First,

that the present gold standard should be maintained; second, that steps should be taken to insure the ultimate retirement of all classes of United States notes by a gradual and steady process, so as to avoid injurious contraction of the currency or disturbance of the business interests of the country, and until such retirement, provision should be made for a separation of the revenue and note issue departments of the Treasury; third, that a banking system be provided which should furnish credit facilities to every portion of the country, and a safe and elastic currency, and especially with a view of securing such a distribution of the loanable capital of the country as will tend to equalize the rates of interest in all parts thereof." After a careful and detailed study, the committee submitted a plan for a currency reform, and among the defects which it pointed out, the following are pertinent to agriculture: ²⁸

"The failure to provide the means for a gradual and sufficient increase of the volume of currency to meet the needs of an increasing population and an enlarging commerce.

"The want of a natural outflow and inflow of the currency when and as, and only when and as, the agricultural, manufacturing and commercial interests of the country require, at a given time, either a greater or a less quantity in circulation.

"The failure to secure such a distribution of the loanable capital of the country as will tend to equalize the rates of interest in all its parts.

"The circulation of a national bank currency based upon Government bonds, presupposing a continuing issue of those bonds, diminishing the loanable funds of the banks, and, by reason of their bond basis, incapable of increasing in volume with a temporary demand for more currency, and of decreasing with the cessation of that demand."

A bill embodying the recommendation of the report was introduced in the House of Representatives by Representative Overstreet of Indiana, and on Jan. 12 the Committee on Banking and Currency listened to arguments in defense of the measures from Senator Edmunds and Messrs. Fairchild, Taylor, Fries and Bush.²⁹

The first action taken was that of March 14, 1900, liberalizing

²⁸ Report of the Indianapolis Monetary Commission, 1898, pp. 28-30.

²⁹ Ibid., p. 14.

the National Bank Act. By this Act, the organization of national banks with a capital stock of not less than \$25,000, was authorized in towns with a population not exceeding three thousand.³⁰ The rate of taxation on circulation secured by 2 per cent bonds was reduced to one-half of one per cent per annum.³¹ Banks were also authorized to issue currency against Government bonds deposited by them up to 100 per cent on the dollar, instead of 90 per cent, as previously.³²

These liberal changes in the law, together with the prosperous conditions in business and agriculture which followed, stimulated the banks to increase their circulation, and a new era came in the organization of national banks. The stimulus to circulation is indicated by the fact that June 29, 1900, the total outstanding circulation of national bank notes, secured by United States bonds, was \$265,303,018, and on June 30, 1914,³³ the circulation had increased to \$722,554,719. However, Wall Street was growing stronger as the central magnet for money and credit in the United States.

The rigid reserve requirements were responsible in a large part, at least, for the concentration of the reserves in New York. The country banks were anxious to get the interest their surplus funds would earn, and they felt that they could call upon their reserve banks when the funds were wanted. This situation continued and grew more intense, until the readjustment of the banking capital under the Federal Reserve system. Probably the condition which existed about 1907 is fairly representative of the concentration of deposits and reserves of the national banks in New York. Out of the 6,544 national banks in 1907, 38 were in New York City. Of the \$5,256,100,000 deposits in national banks, \$825,700,000 were in the New York City banks; of the \$1,121,400,000 reserves, \$221,300,000 were in the New York banks; and of the \$701,600,000 lawful money held in the banks, \$218,600,000 was in New York.³⁴ These figures indicate the concentration of surplus funds of the national banks in New York. The same practice of the concentration of funds from the

³⁰ Act of March 14, 1900, C. 41, Sec. 10; 31 Statutes at Large, 48.

³¹ *Ibid.*, Sec. 13; 31 Statutes at Large, 49.

³² *Ibid.*, C. 41, Sec. 12; 31 Statutes at Large, 49.

³³ Report of the Comptroller of the Currency, 1914, vol. 1, p. 8.

³⁴ Compiled from the report of the Comptroller of the Currency, 1907.

country banks and smaller centers in the larger city banks was characteristic of the national banking system throughout the country. Neither the banks of New York, Chicago, St. Louis, or other reserve cities, could afford to pay interest upon these funds, unless they could be profitably employed. Owing to the probable demand at any time from the country banks, the most adaptable use of these funds was in the "call" loan market.

The extent to which "call" loans dominated in the employment of the bank deposits is indicated by the loans and discounts of the New York national banks in 1901 and 1912. Out of \$611,000,000 in loans and discounts—demand, time with collateral, and time without collateral—of the New York national banks in 1901, \$279,000,000 were "call" loans; and in 1912, out of \$958,000,000 in loans and discounts, \$344,000,000 were on "call."³⁵ This concentration of the surplus funds in the larger centers stimulated speculation. The larger portion was let out on "call" because of the demand rights of the depositors. Not much productive financiering can be done on demand loans, but this was not the fault of any one bank or group of banks in New York; they were all paying interest on their deposits and were in competition for business. If any bank or group of banks should have held aloof from the speculative market and kept their deposits for financing productive operations, they would have lost not only the interest on deposits, but also much very profitable business. Nevertheless, while the financing of speculation was being overdone in New York, on the surplus funds from the country banks, the rural communities, and especially the South and West, were inadequately supplied with circulation for either commerce or agriculture. What funds there were in these sections were conservatively employed in commercial enterprises, because of a more rapid turnover and the greater earnings. Farmers were, therefore, driven to the merchant and the manufacturer for credit for their needed supplies.

³⁵ Compiled from Reports of Comptroller of the Currency.

CHAPTER IV

RURAL CREDIT CONDITIONS UNDER THE NATIONAL BANKING SYSTEM FROM 1900 TO 1914

For the country as a whole there was a very large growth in the national banks from the years 1900 to 1914, due to the following factors:

1. The act of 1900, which by reducing the capital requirements to \$25,000 in towns of less than 3,000 population, made it legally possible for rural districts to support a national bank.

2. The industrial, agricultural, and commercial development of this period.

3. The increase in values, which by enhancing individual and aggregate incomes in the rural communities, brought a larger turnover in money and credit and necessarily larger bank deposits.

4. The development of the check for making payments from demand deposits which promoted by its very convenience over cash payments the development of the small and primarily deposit banks.

5. The increase in number of banks itself which by bringing the bank facilities closer to the agricultural classes established confidence and credit relations and encouraged the depositing in the banks of such savings as had previously been held in private boxes.

A brief review of the prevailing conditions in the nine geographical divisions of the country during this period may serve to illustrate the generality of this development.

In New England, New Hampshire alone gained in number of banks, and that only one; loans and discounts increased in all states except Rhode Island where the decrease was over a million dollars; bank capital decreased in all states; and at the same time circulation increased in all states except Rhode Island—which increase was due to industrial development as in the

quarries of Vermont and manufactures of Massachusetts and Connecticut; and deposits increased in all states.

The Middle Atlantic states show a very large increase in number of banks, loans and discounts, capital, circulation, and deposits.

In the East North Central states, a newer section of the country where more activity and progress was going on than in either the New England or North Atlantic states, loans and discounts, capital, and the number of banks, all show a very remarkable increase. In the state of Indiana alone the number of banks more than doubled, the loans and discounts more than trebled, capital almost doubled, circulation more than quadrupled, and deposits almost trebled. Such development as this in the agricultural states of this division compared with conditions in the non-agricultural New England states signifies conclusively the relation between agriculture and bank development. In this division it is interesting to note that loans and discounts in the years 1900-1914 exceeded the deposits, due to the absorption of savings in investments in fixed capital.

In the West North Central states where agricultural activities exceeded all others and the rural communities were sparsely settled, the number of banks, loans and discounts, capital, and circulation showed an increase even more astonishing than that of the East North Central division. In Missouri the number of banks grew from 83 to 247, in North Dakota from 24 to 149, and in South Dakota from 28 to 106—a remarkable increase which indicates that the principal factor which had hitherto prevented the national banks serving the rural communities with the necessary short time credit had been the high capital requirements for organizing which lay far beyond the accumulated savings of the latter. Loans and discounts increased from a little less than threefold in Kansas to more than sevenfold in South Dakota; capital in almost all the states more than doubled; circulation increased from less than threefold in Kansas to more than ninefold in North Dakota; while deposits increased in about the same proportion as loans and discounts. Two special instances in this division are worthy of note: first, Iowa, where deposits, loans, and discounts were proportionately less than in other states due to the unprecedented development of the state and the increas-

ing prices of land, expenditures for fixed equipment and the like; and second, Missouri, where the same things were greater on account of the speculative markets of St. Louis where large amounts are loaned on call.

In the South Atlantic states where the rural communities are especially poor, the number of banks and their capital more than doubled, while the circulation quadrupled; although in none of these factors does the increase compare favorably with the Middle Atlantic, East North Central, or West North Central states. In the less important agricultural states as Delaware, moreover, capital decreased, while the circulation and deposits increased only moderately, demonstrating that here also slow growth of national banking facilities was due to the high capital requirements that lay beyond the ability of the agricultural communities with their limited savings.

In the East South Central states, primarily an agricultural district whose principal crops are cotton, tobacco, fruits, and vegetables, the number of banks, loans and discounts, and deposits more than doubled; while capital and circulation more than trebled. As in all Southern states after the Civil War capital had been scarce in this section; towns and cities were small, and industry dependent upon agriculture; so that until the act of 1900 the national banks had but a slow growth.

The growth of the national banks in the West South Central states which, with the exception of the oil industries in Texas and Oklahoma, have always been dependent upon the sale of agricultural products for their money income, was more pronounced than in the South Atlantic or East South Central section; due to the large territory covered and the greater opportunity for expansion and development in this pioneer section. Arkansas, a purely agricultural state, illustrates particularly well the new relation between the rural communities and the national banks in that the latter increased in number from 7 to 58 in this period; while the pioneer state of Oklahoma gives a rather remarkable illustration of thrift in that deposits exceeded loans and discounts both in 1900 and 1914.

In the mountain states, which in their habitable portions are either agricultural or mining and use their money and credit to promote those pursuits, the national banks developed at about

the same rate as in the Southern states. It is a remarkable fact, however, that in this sparsely settled region both the years 1900 and 1914 show that deposits exceeded loans and discounts.

The Pacific states showed the largest growth in proportion to the existing banking facilities of any of the geographical divisions. The number of banks more than quadrupled, total loans and discounts became seven times as great, total deposits six times, and total capital five times. Contrary to the popular opinion of economic students who believe that the west is financed by the east, deposits in this section exceeded loans and discounts. While in the Pacific and mountain states gold mining may affect those deposits, the occupation of coast states may be roughly divided into agriculture, foreign trade, mining, forestry, fishing, and manufacturing; the dominating industry being agriculture.

From these facts, therefore, it is evident that there is a definite relation between the growth of national banking facilities and agricultural conditions—a relation that may perhaps be brought out more concretely by comparing specific states. In Illinois, a state in which agriculture is the dominating industry, the value of farm property quadrupled during the years 1900 to 1910, while the banking capital became six times as great—a striking relation between agricultural progress and increase of banking capital. For the same period in New York state farm property value increased from 1.19 to 1.45 billion dollars; while the national bank capital decreased from 112 million in 1870 to 84 million in 1890, then advanced to 169.8 million in 1910. In this state, therefore, bank capital tends to decrease with the decrease in value of farm property until the last decade, when the tremendous increase is due to the growing importance of New York City as a commercial center. Again in Massachusetts and Georgia statistics are of like purport. In the latter, one of the most flourishing agricultural states of the South, from 1870 to 1910 farm property increased in value five times and banking capital twelve times—a significant relation—while in the former state banking capital fluctuated almost in accordance with agricultural values until manufacturing became the dominant industry of Massachusetts, when it steadily declined.

Thus the fact of the spread of the smaller banks into rural communities during this period is outstanding. It is to be ob-

served that the largest number of these banks were organized in the Western states, but in New England and the Eastern states, where manufacturing and commerce and not agriculture were of dominating importance, a large number of state banks which rather significantly possessed much larger capital than those of the South or West, were converted into national banks. This was partly due to the Act of 1900 which also brought with it the need of additional circulation. The forces which stimulated the note issue were incorporated in the Act of 1900: a reduction to one-half of one per cent per annum on the tax on circulation, secured by 2 per cent bonds, and an increase in the amount of notes to 100 per cent of the par value of the bonds deposited.

The increase in outstanding circulation from \$265,303,018 on June 29, 1900, to \$722,554,719 on June 30, 1914, should have permitted the banks to reach out into the country and serve agriculture with the necessary cash, but the steady rise in prices, which began about 1896, and the increased volume of business and speculation, soon took up the additional circulation provided, and the value of the crops of the country had reached proportions so immense, that the movement to market in August and September continued to cause annually a dangerous absorption of the currency.

The Crisis of 1907

The crisis of 1907 is properly known as a "bankers' panic." Unlike the years of most previous crises, in 1907 the crops were large and prices above the average. The real cause of this crisis may be briefly summed up as a loss of confidence among bankers, speculators, security holders and in places of high finance. For a decade prosperity, high prices, and an unheard of production of gold had been accompanied by the usual cycle of speculation and investment in fixed capital, which with advancing interest rates was necessarily accompanied by a decline in the price of securities. This brought on a period of liquidation just preceding the panic. The tendency toward liquidation undermined the confidence of speculators and large security holders; consequently the crash came and spread over the country, affecting the movement of crops, business, and

prices in general, and was of international consequence, but was, however, more acute, lasting and severe in the United States than in any other country, because of our inadequate currency system.

The National Monetary Commission

Under the Act of May 30, 1908, a National Monetary Commission was created whose purpose was "to inquire into and report to Congress at the earliest date possible what changes are necessary or desirable in the monetary system of the United States, or in the laws relating to banking and currency."

This commission made their investigation international by inquiring into the principal monetary systems of the world. When their investigation was completed the following main defects in the national banking system were pointed out:

National banking law required banks to keep a large part of their reserves in their own vaults, thus preventing the free flow of credit from sections where the supply was abundant to sections where there were stringent needs, and creating a tendency in times of distress for all banks to safeguard their own interests and draw to themselves a maximum of reserves.

A portion of bank reserves, moreover, had to be deposited in the central reserve cities; which, however, treated such reserves as individual deposits rather than mobilization of credit for adequate security.

Banking laws generally forbade the extending of further loans when reserves dropped below a prescribed legal minimum. The reserves were thus regarded, not as a basis for the extending of additional credit when the conditions were demanding it, but rather as till-money to be paid out over the counter. Such elasticity of reserves was little better than none at all. Each bank stood almost entirely by itself. There were scarcely any centralized reserves and no indirect market facilities which permitted reserve mobilization during periods of stringency. Also, the facilities for direct borrowing were limited, and when trouble appeared on the horizon, each bank started hoarding for itself, and panicky conditions were almost inevitable.

Under the Act of 1900 the banks were authorized to issue notes up to the par value of the United States bonds deposited

with the treasurer. The market prices of bonds before had influenced the note issue of the national banks, and was generally adverse to the needs for notes. The premium on bonds and the tax upon note issues and other costs also made it unprofitable for the banks to issue more than could be, without doubt, kept in circulation. There was no competition in the issue of notes by the national banks as in the Canadian banking system. The limitation placed on redemption of notes discouraged banks from issuing them for temporary needs. The bonds available for note issue were not elastic in themselves, according to the needs of the country's trade, but varied with the revenue demands of the Government.

"We lack means to insure such effective coöperation on the part of the banks as is necessary to protect their own and public interests in times of stress or crisis." At such a time the public should be served liberally with credit in order to prevent a panicky situation from entering the public mind. But as the national banks have no way of replenishing their reserves they would naturally wish to restrict credit and hoard reserves for future use. Banks in the clearing-house cities coöperated and pooled their reserves, clearing-house certificates were issued and passed among members of the clearing-house. These, however, were palliatives, rather than preventatives, and they were only locally effective. The country banks and rural interests were helpless.

Under the national banking system, there was no organized system of domestic clearings, but clearings depended upon the voluntary inter-relations established between banks. Logically, the banks kept exchange balances in the larger centers to facilitate trade. This offered opportunity for considerable deception. The banks generally regarded exchange balances as part of their lawful money reserve, and credited their exchange balances at the time they were remitted for collection, charging against such balances only items that were in hand, and for which remittance had been made. These exchange balances were for the most part treated as "other deposits," and no special reserve was held against them. But when a stringency came, the banks would draw upon their exchange balances and in nearly every case insist upon having currency. This placed the banks

acting as reserve agents in a difficult position. Also it completely destroyed the system of domestic exchange at the time when it was most needed.

“There was a lack of commercial paper of any established standard.” After the Civil War, owing to the situation which developed in connection with the depreciated currency, there arose in credit transactions of short-terms a practice of liberal discounts for cash. This gave rise to the single-name paper with which merchants borrowed on their own notes and bought for cash gaining the benefits of the discounts. This sort of paper showed nothing as to the use to which the credit was to be put, and was essentially personal credit. From this the system of the manufacturers and merchants in the larger centers carrying on open account the small dealers who could not get credit readily at the bank arose, which in turn limited the amount of commercial paper available for the banks to purchase, and narrowed the commercial paper market. The larger dealers used their accounts receivable as a basis for advances from their local banks, and as a result, restricted the origin of commercial paper to well-known dealers in the larger cities. The banks in the larger centers, therefore, had the advantage of being able to invest surplus funds in commercial paper, whereas the country banks were not in position to know the character of the paper, nor able to get hold of any of it, if they wanted it. This led to the practice of the banks of the smaller communities depositing their surpluses in the banks of the larger centers, which drew from the rural communities the savings of those communities, and left them without the necessary cash to carry on productive operations.

Owing to the narrow character of our discount market with its limited range of safe and profitable investments for banks, money and credit became concentrated in New York. The deposits of correspondents were treated as individual deposits, and since it was the practice to pay interest on these deposits, the banks found it necessary to utilize their credit to the fullest extent possible. No reserves were kept against these deposits and they were used mostly in call loans for speculative purposes upon the stock exchange, and not for the promotion of trade and industry. This diverted the funds of the country into mate-

rially unproductive uses at times when agriculture, industry, and commerce were stagnated for want of the mobilizing forces of credit.

The lack of a broad discount market and dead-line reserves made each bank responsible for itself in times of crisis. Under such a system, the banks could not discount some of their perfectly good assets and secure credit. Nor could they go to any central point and borrow the necessary credit. Consequently, each bank was extremely cautious to protect itself, and agriculture was unduly discriminated against, since the farmers' paper usually had a longer maturity than that of the merchants. A broad discount market would have enabled the local banks to dispose of some of their well-secured paper and provide for the emergent needs of the community; but instead local bankers and their clients were alike at the mercy of the financial weather.

In the South, West, and the rural communities the high capital requirements prohibited the organization of national banks, even after the Act of 1900. This might have been bridged by a system of branch banking, but branch banks were generally in disrepute in the United States, and while the national banking laws did not expressly forbid the establishment of branch banks, there was no provision which implied that such authority existed, and it was construed to mean that the general business of a national bank must be conducted in one office or banking house designated in the organization certificate. Such conditions compelled agricultural communities to get along without the necessary banking facilities, and the credit which the agricultural classes were obliged to use was supplied by the country stores at profiteering rates, which caused stagnation in the rural communities of the South.

The interest rates in different communities fluctuated widely, due to the immobility caused by the strict legal requirements. Owing to the absence of open market operations credit did not flow freely; thus, the rates in some communities were very much higher than those in others. Yet the flow of credit was not free enough to permit the excess from one community to pass to another, where the demand was much greater.

By the Act of 1864, the national banks were forbidden to make loans upon real estate security. This took away the chief se-

curity of the farming classes. It also drove the banks to invest their surplus in the larger centers, instead of in their home communities. The provision prohibiting national banks loaning for long terms on a farm mortgage security was a very wise one, because the limitations placed upon the national banking system by restrictive legislation made it necessary for it to hold rather closely to commercial banking practices.

CHAPTER V

CONSEQUENCES OF THE LEGAL AND ECONOMIC RESTRICTIONS UPON THE NATIONAL BANKING SYSTEM

The legal restrictions upon the national banking system, and the economic restrictions upon accumulating savings, were the two great handicaps for the agricultural communities. We have reviewed these restrictions in so far as possible in their chronological order. It is now our task to summarize briefly the consequences.

The seasonal demands of agriculture made the most noticeable impression upon the inelasticity of the national banking currency. The most conspicuous demand of agriculture for currency elasticity is during the crop-moving season. The marketing of crops is unlike the marketing of manufactured goods, because the latter can be distributed over the entire year, while the marketing of the bulk of agricultural crops comes during a few months in the fall and winter. This creates an annual rise and fall in the demand for large sums of currency in the interior.

It would seem that the note issue privilege should supply the necessary elasticity in a system of national currency, but such was not the case under the national banking system. The bond-deposit security requirements made the system rigid and unable to respond to sudden demands. The issue of notes depended very largely upon the price of Government bonds, which was usually adverse to the need for notes. The factors which controlled the market price of bonds might have little or no effect, or even an opposite effect, upon the demand for notes, and these influences were entirely outside the control of the banks. At the very time the demand for notes was greatest, the banks had least encouragement to issue notes; because the rates were such that the greater profit was to be obtained by the direct investment of capital funds. Therefore, it could almost be confirmed as a

case-made rule that a bond secured circulation is inconsistent with the automatic adjustment of the quantity of notes to the demands of business.

The deposit currency possessed a high degree of elasticity for business interests, but in the country districts farmers had never learned to use the check and deposit method, and bankers had not encouraged it. Furthermore, before the expansion of national banking facilities after the Act of 1900, accommodations were not available in the rural districts to build up the practice of deposit currency among farmers. The rural population distrusted checks, and the custom was established of making most payments in coin, or some form of bank notes. The farmer had to pay hired labor with cash, and frequently the local merchants and tradesmen demanded coin or notes. This made it necessary for the farmer to demand cash or note currency for the products he had to sell. This demand for currency by the agricultural classes strained the entire credit structure at the annual marketing of the crops. Moreover, these payments made to the farmer for his crops did not immediately find their way into circulation again. During almost the entire history of the national banking system, the check system of payments was inconvenient and impractical for the farmer. And as a result he was compelled to keep on hand currency for forthcoming outlays. Oftentimes large sums were thus held for paying wages, buying feed, spring supplies, and to make payments on mortgages.

In our strictly agricultural regions, the demand for currency is similar to that of Canadian agricultural demands. But the national banking system was unable to supply the currency needs in the way that they are supplied by the Canadian banking system. Asset and branch banking enables the Canadian banks to supply currency in any community almost instantaneously, whenever the need is felt. But neither of these functions could be carried on under our national banking laws. The emergent need for notes was often past by the time an issue could be obtained under the bond deposit system, and if it could be obtained at all, the prohibition of branch offices prevented the banks reaching out into many of the rural communities where the need was most urgent. If, under the national banking system, notes had been supplied to meet the autumn demands of

the agricultural classes, there was no way of bringing the notes in for redemption when they had performed their function. This compelled a passive expansion of the national currency which was really what happened many times, and particularly after the Act of 1900, when the smaller national banks reached out into the rural communities, as was shown in the annual increase of the volume of note currency.

Probably the deficiency of note currency in the agricultural sections of the United States before 1900 can be indicated by the percentage of permissible issue, in excess of required bond deposits, which banks actually issued in representative divisions of the East, South, and West.

TABLE IV.—PERCENTAGE OF PERMISSIBLE ISSUE OVER REQUIRED BOND DEPOSITS IN 1897 ¹

East:		South:	
New Hampshire	55.9	North Carolina	3.2
Vermont	49.2	South Carolina	4.4
Rhode Island (outside		Florida	5.4
Providence)	53.9	Alabama	5.1
West:		Mississippi	4.2
Nebraska	2.6	Arkansas	0.8
Kansas	6.9		
Missouri (outside St. Louis)	4.7		

Table IV shows concretely the inequality of the note issue in the different sections of the country, and the deficiency of notes in the very communities where they were needed most. The reasons for the failure to issue notes where needed are many. After the restrictions of the note issue were removed, the interest rates remained so high in rural communities that it was more profitable to loan capital funds direct than by the round-about method of issuing notes secured by bonds. Also, the scarcity of banks in these sections, and the inability of the existing banks to establish branches under the law, prevented the penetration into the rural districts where notes were needed.

Particularly because of the opposition to monopoly and centralization of banking power in the United States, branch banking has never met with favor, and national banks were not legally

¹ Compiled and computed from the reports of the Comptroller of the Currency, 1897.

authorized to establish branches. This prevented the banks in the larger centers reaching out and supplying the rural districts with note currency where the greatest need for such currency existed. The capital requirements for organizing a bank previous to 1900 and even since, have been such that the country villages, in many of the sparsely settled districts of the West and South, have been unable to support a national bank. The state banks might have taken up the problem of establishing branches in the rural communities, but the tax upon state bank note issues drove them out of this field, and deposit currency would not satisfy the requirements of the agricultural classes; and, if branches had been permissible in the rural districts, the laws governing the note issue were inadequate to provide for the contraction of the currency when it had performed its function. Doubtless, some such competition in the issue of notes by the various central banks as exists in the Canadian system, could have been devised. In Canada, the twenty-nine banks, with their network of over 500 branches each, are in competition for the business of issuing notes. The national banking system lacked any such possibility of extension of facilities or the expansion and contraction of the currency according to the needs of the various districts and the country as a whole. This monopoly of the note issue by the national banks and the prohibition of branches were the principal handicaps which prevented the system serving the rural interests. Due to these limitations, the circulation, particularly in the South and West, was very inelastic and inadequate.

The issue of notes was limited by the original National Bank Act to \$300,000,000, and as early as June 1, 1865, more than \$250,000,000 had been authorized. In Massachusetts, Rhode Island and Connecticut, where the existing banks had been converted into national banks almost in a body, they were entitled under the legal apportionment to less than \$34,000,000, but had received authority for \$85,000,000. New York, New Jersey, Pennsylvania, and Ohio had more than filled their legal quotas; the West and Northwest, Indiana and Minnesota excepted, were generally still short of theirs; and the states in the South, and the states and territories west of the Missouri, entitled to nearly \$100,000,000, had received authority for only about \$5,000,000,

of which nearly three-fourths was in Kentucky and Missouri.²

By October 1, 1866, when \$292,673,000 of notes had been given out for circulation, the allotment between certain groups of states was as follows:³

TABLE V.

	<i>Quota if Apportioned in Millions</i>	<i>Amount Issued in Millions</i>
Of States having an Excess:		
Six New England	45.7	103.5
Five Middle	94.9	124.2
Ohio, Indiana and Minnesota	28.3	30.7
Of States Deficient:		
Six Western	37.7	18.9
Kentucky, Tennessee, Arkansas	22	3.6
Nine Southern, Atlantic and Gulf .	66.2	6.9

Perhaps the inequality shown in Table V was permitted because the agricultural states of the South and West would, in all probability, have been unable to use their quota of the circulation for some time. The Eastern and Middle states had their demands for notes augmented by the elimination of the state bank circulations, to which the public had been accustomed. However, the attainment of the limit of circulation checked the growth of the national banks from 1866 to 1870. In many communities, where banks were organized, they were asked to forego their right to note issues, and in many cases in the South and West the privilege of starting new banks was bought when banks in New England and New York had failed, and in other instances they bought the circulation of New England and New York banks.⁴

The situation of the West and Northwest was very different from that in the East. After the Civil War, a new period of rapid growth came. The population increased rapidly, transportation facilities opened up new territories, and in these fertile sections there appeared unlimited opportunities for industry and agriculture. But the increase in banking facilities which should

² *Bankers' Magazine* July, 1865, p. 54.

³ Quota for each state, 7 House Exec. Doc., No. 33, of 1865-66. The amount issued to banks. Comptroller's report for 1866, p. 66.

⁴ *Cong. Globe*, 1867-68, p. 3187.

have accompanied this expansion was very much handicapped. There was no room for additional banks of issue, and banks of deposit and discount could not supply the needs for circulation nor attract capital.

In the Central, Southern, South Atlantic, and Gulf states, the conditions were even worse than in the Middle West. Particularly since the Southern states had suffered heavy losses during the war, and as a result their political and economic structure was overturned and capital was very insufficient. While time and procrastination were necessary for the South to regain its ability to progress and establish sound banking facilities, improvement and readjustment were, no doubt, retarded by the failure to receive the proper portion of the right of issue under the national banking system. This lack of banking facilities, together with the impossibility of developing them, was the underlying cause of the establishment of the very undesirable system of store credit between the agricultural classes and the merchants.

July 12, 1870,⁵ Congress passed an Act providing for the issue of \$54,000,000 bank notes to be distributed among the states having less than their rightful proportion under the Act of 1865, and that the three per cent certificates should be called in and redeemed as fast as the bank notes were issued. When this operation had been completed, a further amount of \$25,000,000 was to be withdrawn from states having more than their allotment of circulation and issued to banks in states having less than their due proportion. Also, it was provided that banking associations might be moved from states having an excess of bank circulation to states found deficient. In the same Act, provision was made for the establishment of gold banks, issuing notes redeemable in gold coin upon the security of United States bonds. These banks played an important rôle in the Pacific states, where gold payments had been maintained during and after the war.

Advantage was immediately taken of the Act of 1870. By November, thirty-one banks had been organized under the new law, and two hundred and fifty applications were on file. This indicates the need which existed for additional banking facilities. Twenty of the banks organized were in Western states,

⁵ 16 Statutes at Large, p. 251.

eight in Kentucky and Tennessee and three in Virginia and Georgia, and nearly one-fourth of the applications, representing one-third of the capital called for, were from the Southern coast states.⁶

These facts indicate the pressing demand for banking accommodations in the South and West. But the real need of these sections was capital. They could get money and credit in a slow, crude way for their products, but the difficulty was to keep it in the community. For example, if the East bought from the farmers of Missouri \$100,000 worth of farm products, a credit for that amount was established in eastern markets. They could obtain this credit in working capital, money, securities, or anything else the East had to sell and the people of Missouri were willing to buy. If they preferred to have money, a movement of this amount would take place from the eastern money centers, say New York, to Missouri. But if later they found they had a surplus of money, it would gravitate back to New York, because the people would wish to buy working capital or something else from the East, or to loan their money out for interest. This same process went on between the various communities and the money centers, and it is obvious that stringent conditions must have existed in communities where purchases exceeded sales. Then the actual scarcity of money and credit in the various communities of the South and West may not have been, and usually was not, due to a general scarcity of currency in the country, but was rather due to the disproportion of currency and capital between the various sections of the country.

The Act of June 20, 1874,⁷ provided for the withdrawal of an additional \$30,000,000 notes from states having an excess of bank currency under the legal allotment, and the distribution among states found to be deficient. The law also provided, among other provisions which were significant for the rural districts, that any bank, upon the withdrawal or reduction of its circulation, might reduce its deposits of bonds to any amount not less than \$50,000. This relieved the banks from making a greater use of the right of issue than their business required. It left more freedom of action among the banks, especially in the

⁶ Comptroller's Report, 1870, p. 25.

⁷ 18 Statutes at Large, p. 123.

larger centers, regarding their issues, and gave the privilege of issue more freedom to gravitate to the communities where needed. By Nov. 1, 1874, New York and Missouri each surrendered more than \$2,000,000 notes, and Kentucky, Indiana, and Illinois together received more than \$2,000,000;⁸ the Comptroller reported that the withdrawal of notes by some banks and the liquidation of others placed at his disposal \$14,200,000 of circulation, probably enabling him to satisfy demands from new banks for some months to come.⁹ The demand for the right of issue was thus declining when, by the Act of 1875,¹⁰ Congress established the free banking system, and waived all provisions fixing a limit to the aggregate of circulation. The stagnation of business following the revulsion of 1873 continued, and by November, 1876,¹¹ the total circulation had fallen to \$24,000,000, which was unequally distributed throughout the country, the greatest decline being in the New England states, due, perhaps, to the decline in the price of United States bonds. There was an advance turn in circulation in 1879, which continued until about 1882; the highest point reached was about \$325,000,000. From this point the circulation declined with the rising price of bonds until about 1891, when the bottom was reached at about \$123,000,000. The decline in the price of bonds reverted the trend of the issue, and in October, 1893, the total circulation of notes was at \$183,000,000. During the disturbed business conditions after the panic, the issue fell off slightly, but again rose, and reached about \$211,000,000 in 1896, and did not vary materially from this point until the close of the century, and was at about \$215,000,000 in 1899.¹²

This brief summary of the fluctuations in the note issue and the conditions affecting it, clearly indicates that other influences quite as important as the need for circulation controlled the issue. The high price of bonds and interest rates in the South and West made it unprofitable to issue notes at the very time they were most needed.

While the reduction of bond deposit requirements by the Act

⁸ Comptroller's Report, 1874, p. 128.

⁹ *Ibid.*, p. 129.

¹⁰ 18 Statutes at Large, p. 296.

¹¹ Comptroller's Report, 1876, p. 262.

¹² Comptroller's Report, 1899, p. 411.

of 1875 was a step in the right direction to reach the possibilities of the South and West, it did not go far enough. Only the wealthier section could afford to pay the note issue requirements. In reaching the agricultural classes, little change took place in the national banking system until after the Act of 1900, which reduced the capital requirements for organizing national banks to \$25,000 in towns of less than 3,000 population, and increased the privilege of issue to 100 per cent of the par value of the bonds deposited. As pointed out above, the national banks from 1900 to 1914 increased rapidly in number, capital, loans, circulation, and deposits in the agricultural districts of the South and West. Other conditions influenced the movement of banking capital to the South and West, such as improved transportation facilities, and the movement of industrial organizations and manufacturing establishments to the sources of raw material in these sections. But as yet, the financing of agriculture continued so restricted under the facilities furnished by the national banks that state banks did a large portion of the business, and in the cattle growing regions a special class of organizations known as cattle loan companies grew up in co-partnership with the state and national banks.¹³

¹³ The work of the state banks, and cattle loan banks and companies, is a copious study, each, within itself, and cannot be annexed to this investigation. However, it should be noted that the state banks generally kept deposits with city banks and banked through them. And the cattle loan companies were usually organized in conjunction with a state or national bank and were able to profit by their facilities, experience, and knowledge.

CHAPTER VI

SEASONAL INELASTICITY AS INDICATED BY CALL LOAN INTEREST RATES AT THE NEW YORK STOCK EXCHANGE

The call loan rates of the New York Stock Exchange measure more accurately than any other available criteria the immediate conditions of the money market. They refer to the present and, perhaps, only in a narrow psychological way represent a discounting of the future. They are based upon the loans of bank and trust company balances, and are payable on demand and renewable from day to day, and they apply largely to loans made for speculative purposes. For these reasons, the rates are highly sensitive. Perhaps the average rate from 1890 to 1908 would be representative for the period of the National Banking System.

The loan fund situation, as evidenced by the average interest rates in Table VI, is very zigzagging. But the average, perhaps, does not show as wavering a demand as really exists in the agricultural communities. According to the averages of this table, the peak demand for loan funds is reached the last week in the year. Obviously, this is the demand for the holiday season. But, as the average interest rates show, the scarcity of loan funds increases from the first week in December to the last. Thus, the rate varies from 3.95 the first week to 7.38 per cent the last week. This scarcity is brought about by other causes, but reaches the acute stage when the holiday demand is brought to bear with its full force. These other causes may be many, but the one of particular importance to agriculture is that on December first the navigation on the Great Lakes closes, and grain stocks accumulate during the month of December, at lake ports and interior markets. This grain is held in storage until the opening of navigation in May. The accumulation of these stores of grain during the month of December requires large sums of loan fund capital. Also, the payments on contracts for May futures command large sums. Other factors which bear upon the interior loan fund demand by agriculture at this season are

the deliveries of live stock, cotton, and the like, and also the payments on contracts for equipments for the Spring.

The interest rate remains high for the first week in January, averaging 6.42. But this week is the closing of the holiday

TABLE VI.—SEASONAL VARIATION IN THE RELATIVE DEMAND FOR MONEIED CAPITAL AS EVIDENCED BY INTEREST RATES FOR CALL LOANS ON THE NEW YORK STOCK EXCHANGE. AVERAGE FIGURES, 1890-1908.¹

<i>Month & Week</i> ²		<i>Average Rate</i> 1890-1908	<i>Month & Week</i>		<i>Average Rate</i>
January,	1	6.42	July,	27	3.43
	2	3.62		28	2.92
	3	2.84		29	2.30
	4	2.50		30	2.37
February,	5	2.45	August,	31	2.45
	6	2.39		32	2.54
	7	2.54		33	2.64
	8	2.70		34	3.66
March,	9	2.79	September,	35	3.04
	10	3.58		36	4.13
	11	3.85		37	4.16
	12	3.24		38	4.33
April,	13	3.62	October,	39	4.23
	14	4.00		40	4.48
	15	3.78		41	3.97
	16	3.03		42	3.56
May,	17	2.94	November,	43	6.53
	18	3.37		44	7.08
	19	3.47		45	3.44
	20	2.64		46	4.80
June,	21	2.44	December,	47	4.25
	22	2.28		48	3.95
	23	2.31		49	4.85
	24	2.41		50	5.49
	25	2.51		51	6.64
	26	3.56		52	7.38

season. However, the second week in January shows a sharp decline in the average interest rate of 3.62, and the decline continues until the bottom is reached at 2.39 the second week in February. This is the easing up period, the slow demand and recuperation from the holiday period during this restful winter month. Then the interest rate rallies, and gradually increases with jerky ups and downs until the second week in April, when

¹ KEMMERER, E. W., "Seasonal Variation in the Relative Demand for Money and Capital in the U. S. Statistical Report, 1910," p. 15.

² In adjusting the weeks at the beginning and end of the year, overlapping weeks in which four or more days fell in the new year were counted as the last week in the previous year.

the peak of 4 per cent is reached. Then the rate declines, with the exception of an upward movement the first two weeks of May, to an average low level of 2.28 the first week in June. Another upward swing carries the rate to a peak of 3.56 the last week in June, and then a decline brings it down to 2.70 the third week in July, which is followed by a long and steady upward movement reaching the high point of 4.48 the first week in October. This steady upward movement is interrupted by only one downward movement the first week in September. This is a decline from the average of 3.66 the last week in August to 3.04 the first week in September, but the average immediately rallies again the second week in September to 4.13 and continues upward until October, when a decline sets in and the average sags to 3.56 the third week in October, then moves up sharply to 6.53 the last week in October and 7.08 the first week in November, which is reacted upon by an equally sharp decline reaching 3.95 the first week in December, then pushes upward again continually until the high level for the year is reached at 7.38 the last week in December.

The upward movements of rates which started in February and, in a general way, steadily continued until April, was influenced by the demands in the interior for preparation for spring work, and for the annual spring payments of mortgages, interest, taxes, and rent. The general decline which proceeded from April to the last of August was indicative of the slackening demand for loan funds. After the spring borrowing, funds accumulate as the contracts of the year before, and of the autumn, are liquidated. When crops begin to move, the demand for funds shoots the rate upward and sharp rises and declines are registered with a high peak the first week in November and the last week in December. These irregular movements are due, not entirely to the seasonal variations, as generally indicated in financial literature, but they are rather short movements within the seasonal variations which are caused primarily by rumors, information, speculation, and the signs of the oncoming business and financial weather. But the peak points reached at the end or the beginning of the month are evidences of the demands for making and liquidating contracts. It is particularly noticeable that for every month there is a characteristic rise or decline in

the interest rate around the end of the month. For some months these fluctuations register sharp peaks, and each one is explainable by conditions which react upon the sensitive financial barometer. The sharp decline after January 1st is the liquidation period, and the cessation from holiday borrowing; the decline around the end of February is the reaction against the lack of the month-end demands for the interior, the rise around the first of March indicates the demands from the interior for the forthcoming spring work. This March demand continues upward and registers in the peak of 4 per cent for the second week in April. This is the highest point since the first week in January, until the second week in September.

The rise for the first and second week in May is, perhaps, explained by the last spring demand for the payment for supplies, and the balances on mortgages, interest, rents, and taxes. Noticeably, however, the first of June shows a decline similar to that of the first of February, which, like that of February, is a reaction against the lack of the month-end demand for funds. This is the lax period of summer in the interior. But, on the last week in June, a sharp rise in rates is registered. This is the demand for meeting mid-year contracts, the payment of interest, and the harvesting of summer crops. A sag in the rates follows in July, and then a rise around the first of August, which has a continuous upward movement until the second week of October, and then, after a two weeks sag, again takes a sharp upward turn, culminating in the average rate of 7.00 the first week in November. Then the sag is continuous, including the first week in December, which is possibly due to the closing of navigation on the Great Lakes and the cessation in the movement of crops East for the winter. This is followed by the accumulation of grain and supplies at the lake ports and interior markets. This, and the demand for the approaching holiday season, sends the average interest rate for loanable funds up to the peak of the year in the last week of December.

But these average rates conceal the truth for any particular year. Upon examination of the separate years, it is found that the peak rates at the New York Stock Exchange were as follows:³

³ The same rate for two consecutive weeks.

TABLE VII.—WEEK OF ANNUAL PEAK INTEREST RATES FOR CALL LOANS AT THE NEW YORK STOCK EXCHANGE, 1890-1908

<i>Year</i>	<i>Week</i>	<i>Interest Rate</i>	<i>Year</i>	<i>Week</i>	<i>Interest Rate</i>
1890	Last week in August ⁴	25	1900	Second week in November	9
1891	2 last weeks in September	6	1901	Second week in May	15
1892	Fourth week in December	10	1902	Fourth week in September	16
1893	First week in July ..	15	1903	Last week in March ..	8
1894	Last week in December	15 $\frac{1}{8}$	1904	Second week in December	3 $\frac{3}{4}$
1895	Last week in December	10	1905	Last week in December	40
1896	Last week in October ..	25	1906	First week in January	25
1897	Two last weeks in December	3 $\frac{3}{4}$	1907	First week in November	50
1898	Fourth week in September	4 $\frac{1}{4}$	1908	First week in January	6
1899	Fourth week in December	25			

As these figures show, out of nineteen years the peak rates were the last week in December for only four years. For the separate years, the average hopelessly conceals the peak of the interest rates. The second high peak in the average is the first week in November, while for the separate years the peak rate is found the first week in November only one in nineteen years. This is the usual case of the statistical average in finance and it explains, perhaps, many of the blunders made in research in this field where the statistical average has been used as the panacea for all financial ills.

The call loan interest rates at the New York Stock Exchange for the first year following panicky years are particularly noticeable. Also, it is noticeable that the peak interest rate for each of the years following the panics of 1893, 1903 and 1907, came at the end of the year, the first two the last week in December, and the last the first week in January. Nearly all the peaks in the interest rates came in the fall and winter months, when the interior demands were heaviest. In not a single year was the peak reached in June or February.

In one year, the peak was reached in July, and in one in

⁴ Seasonal Variations in the Relative Demand for Money and Capital in the United States, by E. W. KEMMERER. Senate Document 588, 61st Congress, Ed. Sess., 1910, pp. 235-236.

March. These years were the panicky years of 1893 and 1903, and the panics were financial, and had nothing to do with the demands for funds for agriculture.

The loan fund demands for agriculture, however, are not always greatest in the same months for each successive year. The spring demands may be delayed due to the late spring or the delay in selling the last season's crops, or the delay may be due to a break in the confidence of the agricultural classes. The fall and early winter demands are irregular for similar reasons, as the late harvesting, uncertain prices, slow marketing, and the like.

CHAPTER VII

MOVEMENTS OF CASH BETWEEN GEOGRAPHICAL DISTRICTS ¹

In the preceding chapter, the aim has been to show the demand for loan funds at different seasons of the year, and for separate months, weeks, and periods, as evidenced by the interest rates on the chief speculative money market in the country,—The New York Stock Exchange. In the following pages, we are interested in learning the relative demand of one section of the country, compared with the other sections of the country. (Money in this discussion means money in the popular sense of currency, unless otherwise specified.) The principal criteria used are currency shipments. The economic principle underlying this phase of the investigation is based upon the Ricardian theory that money flows from the place where it is *relatively redundant* to the place where it is *relatively scarce*. The exchange rates demanded in one city of another express the relative value of money in the borrowing city to that of the lending city, but we cannot take up exchange rates in this investigation.

In this study, each geographical division will be studied in its relation to all other geographical divisions, and the cities of New York, Chicago, and St. Louis will be considered separately.

The New England States

The receipts of cash in New England from the Eastern states register the peaks in March and October. The receipts from other geographical divisions are negligible; however, receipts of cash from New York City are largest in April and October.

The explanation for these movements of cash toward New England in April and October have been explained by Francis

¹ The data used in this analysis are the currency receipts and shipments, 1905-1908, based upon a circular inquiry sent by the National Monetary Commission through the office of the Comptroller of the Currency to the managers of the clearing houses. The monthly totals for the four years are divided by 4 and the average is used.

B. Sears, Vice President of the National Shawmut Bank of Boston, as follows:

"Immediately preceding October 1 and April 1, I should say that a large quantity of money would be due to the shoe manufacturers of this vicinity from Western and Southern jobbers, and the volume would be sufficient to have a marked effect upon the exchanges between New York City and this city, as New York is the central banking city of the country, and settlements are finally made through the banks there. . . . Immediately preceding April 1, there is also a large demand from towns and cities near to New York and Boston for small currency. I never have been able to inform myself, nor to get from any other person, a satisfactory explanation of this movement. It may have something to do with the preparation of the farmers for their operations and the consequent purchase of implements, seeds, etc. The movement does not last long, and the currency comes back quickly."

Mr. Sears's inference, is, perhaps, about correct. It should also be noted that in April and October, drygoods manufacturers and jobbers in New England receive their payments from other sections of the country, through New York City. The July and January increased receipts are, probably, due to the payment of interest on securities held in New England. At this point, it should be noted that New England settles its balances with the rest of the country through New York, and many of the shipments of cash between New York and other divisions of the country are for settlement purposes and do not indicate the trade relations existing between New York City and other divisions of the country.

The shipments of cash from New England to the Eastern states are rather heavy in January, perhaps due to the purchase of securities and the payment for holiday purchases. Then the shipments decline, due to the inactive buying at that season of the year, after which follows increased shipments for March, April and May, in response to the active spring buying. June is a slow month, due, perhaps, in part to the beginning of the vacation season, and the decline in the purchase of cotton and wool by the mills. July shows an increase which is generally thought to be due to investments. August, like June, is a month when buying declines. It is the month before the purchases are made

for the succeeding spring supplies. September and November are the months of largest shipments, due, perhaps, to the demands of Eastern correspondents by their farmer customers for the harvesting and marketing of crops and the purchase of feeder live stock at this season of the year.

In comparing receipts with shipments, it is observed that the months of largest receipts in New England from the Eastern states are March, January, April, October, and June while the months of heaviest shipments to the Eastern states are November, September, January, December, and May. It is interesting to note that January is the second month in order of heaviest receipts, and third in shipments; and it is the only month included among the five highest of both receipts and shipments. This is due, no doubt, to the fact that January is the month for liquidation of interest and securities, the new year investments, and the payment of obligations.

The shipments of cash from New York City to New England register the two highest peaks of the year in April and September, which correspond to the seasons when the farmers are most in need of cash, and the months when payments from other sections of the country are made to the shoe and textile manufacturers of New England. Little cash is ever shipped from Chicago and St. Louis to New England. This does not indicate that the districts banking through Chicago and St. Louis do not buy from the New England manufacturers. It is easily possible and, indeed, quite probable, that either of these Middle Western districts may owe more to New England than New York or any other Eastern district. Then why are there so few shipments of cash between New England and the Middle Western districts? This is a problem of bank clearings for which New York is the principal banking center of the country. Also, under the national banking system, one of the three central reserve banks of the country was in New York and this was the only one east of Chicago. This and similar influences created confidence in the New York draft as the national banking instrument. Consequently, Chicago and St. Louis maintained their principal Eastern correspondents in New York, and through these correspondents transacted business between themselves and other eastern banks, including Boston.

The Eastern States

Cash receipts within the Eastern states are found to reach their highest points in January, December, July, August, and April. The lowest points are registered in November, February, and June. Chart I shows the cash shipments within the division to be largest in October, December, September, and November, and lowest in February, May, and June. This is hardly worth commenting upon, because if all receipts and shipments of cash within the district were reported, they would be equal. But it does show conspicuously the months of largest shipments and receipts in the district, which indicates the economic and financial conditions within the district. January and December are the months when the buying for the Christmas holiday season takes place, the annual payments of interest, dividends and rents, the liquidation of debts, and the making of new investments. July and August are the summer vacation months, when large sums of cash are needed, and April is the month when the farmer makes his purchases of seed, fertilizers, implements, and the like, and quarterly dividends are paid on stocks. November is the month of rest between the autumn buying and the Christmas season, and cash perhaps is being hoarded for the winter holiday purchases. February is the dull month of winter, as well as the recuperation period following the winter holidays. June is the month of savings for the summer vacation period and also the month when farmers are buying least in this section of the country.

The largest shipments in the Eastern states are made the last four months in the year. This is the season when the merchants are paying for their Christmas and winter supplies, and agricultural products and canned goods are being placed in storage. The months of lightest shipments are February, May, and June, because they are the months of lightest receipts.

The receipts from the New England states are highest in January and December, primarily, for the reasons already explained, the payments for holiday supplies, the year-end liquidations, and the new year purchases. The months of lowest receipts are April and September, and, noticeably, April is the month of largest shipments from the Eastern states to New England, and October

the second largest. followed by the rise to third place of August and the September decline in the movements of cash in either direction. However, March and April, and September and October, are well known to be the seasons when large sums are due New England manufacturers and jobbers for shoes and textile goods.

The peak of the receipts of cash by the Eastern states from the Southern states is \$9,889,000 in January, the month of smallest shipments from the Eastern to the Southern states, the average being \$786,000. The trend of receipts from the Southern states, however, declines in February and March more than half, then moves upward about a million dollars in April, after which a steady decline continues until September, when the minimum receipts for the year are reached at \$1,595,000. Then the curve of shipments steadily moves upward and registers the peak of the year in January.

By reference to Chart I, it is clear that, as the movement of money to the Southern states increases, from July to December inclusive, the receipts of cash from the Southern states decline. On the other hand, as the receipts increase in January to the maximum, the shipments shrink to the minimum. During the months of August, September, October, and November, when the shipments of cash to the Southern states are swelling, cotton, tobacco, and peanuts are being harvested and stored; fruits and vegetables are being canned, a large part of which is done with borrowed funds, for which merchants and jobbers are middlemen. But in January farmers pay their interest, liquidate their notes, make their annual investments, and the middlemen settle with their Eastern creditors, for whom they are often merely agents or correspondents. Also, at this season the merchants make the payments on their spring supplies of groceries, clothing, fertilizers, farm implements, and the like.

Between the time the farmers receive pay for their crops, from August to December, and the purchase of the new year supplies from January to July, there seems to be a hoarding period. This is due to the long duration of inadequate banking facilities in the South, which made it necessary for the farmers to hoard their income in the autumn, in order to meet

the spring payments of interest, instalments on mortgages, and the purchase of new supplies. The farmers were justified in this selfish practice as long as banking facilities were inadequate, and

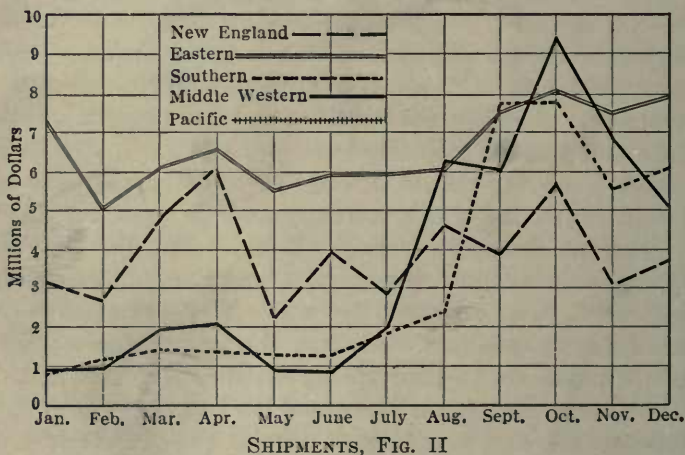
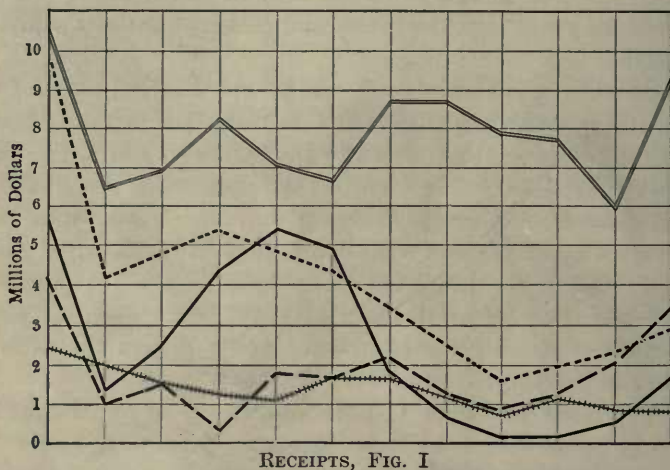


CHART I.—Average Receipts and Shipments of Cash by Geographical Divisions, 1905-1908, Eastern States.

they could get only 3 per cent on deposits for six months or more, but were compelled to pay from 8 to 12 per cent for borrowed funds.

The movements of money between the Middle Western and

Eastern states are similar to those of the Southern and Eastern. The shipments from the Middle Western states are greatest during January and May. In fact, from December to July there seems to be a strong movement of cash toward the Eastern states, while from August to November this movement is very small.

The movement from the Eastern to the Middle Western states registers the highest point on the curve in October at \$9,511,000, and the lowest in January and June, at \$872,000 and \$863,000, respectively. The months from January to July, when the shipments of cash from the East to the Middle West are lowest, the reverse movements are highest.

These movements between the two sections are explained primarily by the agricultural conditions. Beginning in August, when the average cash movement from the East to the Middle West swells to \$6,332,000, and continues strong through December, the harvesting and marketing of the wheat, corn, and cotton crops and the disposition of feeder live stock for the winter are taking place. In August, the crop moving demand is keenly felt in St. Louis, and the demand for moneyed capital increases until October, when the movement from the East reaches \$9,511,000. The first demands in July and August are created by the movement of the wheat crop in Kansas, Missouri, and Arkansas, then the movement of the corn and then the cotton. The financing of live stock feeders from the Kansas City yards also comes in for its share in the autumn. The settlements by the merchants of their Eastern accounts for drygoods, hardware, boots, shoes, and textiles, create an additional demand for Eastern funds in November and December, and cause an acute tightening of the money market. From the first of the year until July, funds move from the St. Louis district to the East. This is in response to the purchases of equipment and supplies in the East, the payment of interest on borrowed funds, the liquidation of debts, and the making of new investments.

Chicago is the chief money market of the Middle West, and the close communication between Chicago and New York enables the financial machinery to register the seasonal movements of currency between the East and Middle West with extreme sensitiveness.

The decline in the demand for moneyed capital in the Middle

West in January is due to the completion of the crop moving period; however, the process of providing equipment for the new year, and the investment of the year's surplus draws the cash back to New York. This process reaches its highest point after January, in May, at \$5,400,000. This is about the time when the payment of interest, installments on mortgages, and the spring supplies, are largest. Also, in April, May, and June the Middle Western merchants are making payments for their summer and fall supplies.

In July, the movement of money is reversed and the shipments exceed the receipts from the East to the Middle West. The Chicago and New York money market seems to grow tense, due to the demand for July settlements in the East and the growing demand for harvesting funds in the Middle and South West.

The crop moving demand, ending in December, is followed closely by the holiday demand in both Chicago and New York; after which the demand in Chicago relaxes until the weather opens up and the farmers begin active buying for the spring work, and the Great Lakes shipping is reopened in May.

The shipments of cash from the Eastern to the Western states is shown to be of little importance until the autumn. Beginning in September, the movement increases until November. October, November, and December are the months when Western ranch cattle are being marketed and new stock is being placed for winter feeding. Also, some grain is being moved East from this section.

On the reverse movement, the highest point in the Eastern receipts from the Western states is reached in January, in response to the holiday demand, the payments of interest, and installments on mortgages. However, there seems to be a general movement of cash from the Western to the Eastern states throughout the year; the highest receipts are \$271,000 in January, declining to \$71,000 in February and \$10,000 in April. Then, it advances until it reaches \$86,000 in June, in response to the spring demand, but declines again, until the lowest point, \$8,000, in September. The autumn purchases of eastern supplies and payments on indebtedness advance the shipments to the East to \$91,000 in October, \$58,000 in November, and \$50,000 in December.

Like all the other geographical divisions, the Pacific states ship the largest sums of cash to the Eastern states in January, for the same reasons that have been explained. The trend of cash shipments from the Pacific states to the East is rather regular from February to August, the largest shipment being \$1,975,000 in February and the smallest \$1,103,000 in May. The steady movement of cash out of California from January to March is due to the same causes as enumerated for the Middle Western states, and, in addition, the unsatisfactory tax laws of California which tax cash and credit on hand, encourage the movement out of the state of all funds possible by state banks, trust companies and individual tax payers, before the first Monday in March.² The evidence that this is done is shown by the very great movement of cash from the Eastern to the Pacific states in April and May, for no other apparent cause. The Pacific receipts from the East in March are \$50,000, in April \$2,454,000, May \$1,011,000 and June \$37,000. The same fact is evidenced in the movements of cash between the Middle Western and Pacific states.

Middle Western States

The movement of cash between New England and the Middle West is impossible to measure, because New York banks act as middlemen between these two divisions of the country in matters of finance. However, some cash is shipped direct from New England to the Middle West. The average for the four years is less than a million dollars for any month, but the seasonal cycles are clearly shown in the receipts from New England. The spring peak comes in April, at the time when farmers in the Middle West are buying supplies for the spring planting, and the autumn peak comes in October, at the time when the crop moving is heaviest, and New England is making payments for her winter food supplies from the Middle West.

The shipments of cash from the Middle West direct to New England are negligible. But the Middle West pays New England in some way the cash borrowed for planting and moving crops, interest on mortgages, and for supplies. This is done

² Deering's Annotated Codes and Statutes of California. Political Code, vol. 1, Title IX, Chap. III.

through New York correspondents, and thereby swells the flow of cash to and from New York.

The shipments of cash between the Middle West and the East are very pronounced. The Middle Western receipts of cash from the East exhibit very strongly the seasonal demands of Middle Western agriculture. In March and April, the spring demands reach the highest points. This is followed by the usual May decline. From June until October, the receipts increase, reaching the high point of \$8,651,000 in October. These are the two periods of the year when the farmers are borrowing the largest amounts,—in the spring for planting, in the autumn for harvesting and marketing, and the purchase of feeder live stock for the winter.

In the shipments of cash from the Middle West to the East, the peaks in the annual cycles came in January and May. The months in which the Middle West receives the largest shipments from the East, the East receives the smallest shipments from the Middle West. Roughly, it might be said that, with the exception of the spring planting demand, the first half of the year cash flows to the East, and the second half of the year, cash flows from the East to the Middle West. This is a normal economic distribution. In the autumn, the Middle West requires larger amounts of cash to market and move the crops, and stock the farms. In the first few months of the new year, the cash flows back to the Eastern states to pay for supplies, make investments, pay interest on mortgages, and the like. But the Middle West ships annually an average of \$31,729,000 to the Eastern states, and receives \$35,741,000. This is, perhaps, due in part to the buying of Western farm mortgages by Eastern investors, and similar investments.

The receipts of cash by the Middle Western states from the Southern states are alternative with the Eastern states. The largest receipts are in the late winter and spring months and gradually decline through the year, until December, when a material increase is shown. These spring shipments are in payment for provisions, grain, live stock, farm machinery and the like. The peak of the receipts from the South is in January. By this time, the cotton and tobacco have been sold, and spring supplies are being bought for the next season. Moreover, the

rather steady movement of cash from the South to the Middle West throughout the year is due to the continuous buying of provisions, as packing house products, for which the South depends upon the Middle West.

The shipments of cash from the Middle West to the South are largest in October at \$10,792,000, and September at \$8,542,000. These are the months when the cotton, tobacco, and other Southern crops are being harvested and heavy loans are made to the Southern planters. But it is peculiar why the Middle West should ship more cash to the Southern states in October than is received from the East when this is the month when the demands for cash in the Middle West are greatest.

It is also confusing to observe that the Middle West ships the South \$47,135,000, and only receives \$29,902,000. Perhaps the payments are made in part through New York, in which case the exchange method of payment obscures the cash transactions between the two sections. However, the seasonal cycle is clearly shown in the heavy receipts from the South the first half of the year, and the heavy shipments to the South the second half of the year.

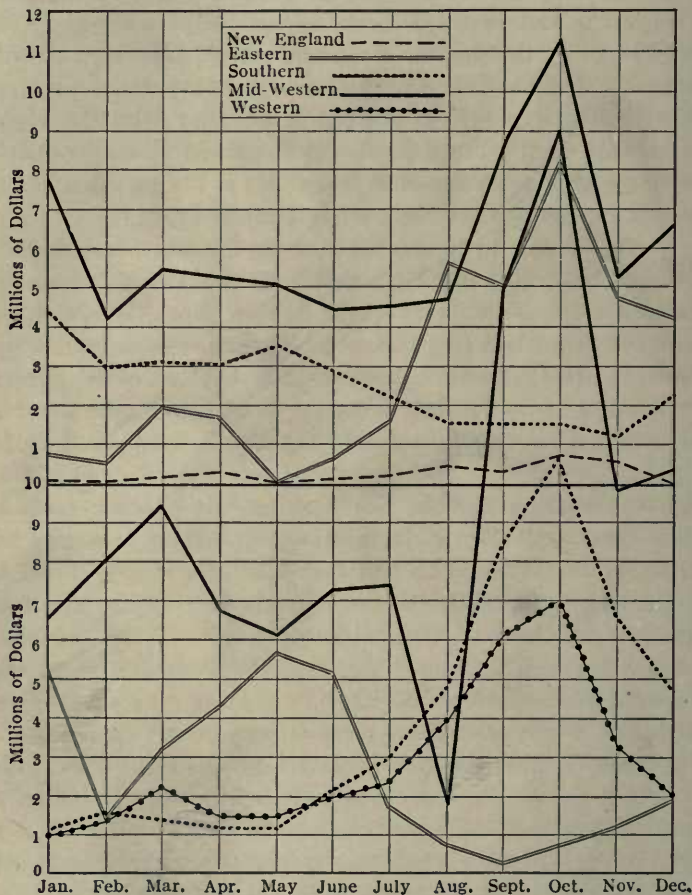
The explanation for the heavy shipments of cash from the Middle West to the South during the crop moving season in both sections, is to be found in the fact that the Middle West has two Central Reserve cities, Chicago and St. Louis, while the Southern states have no Central Reserve city. When the Southern crops are sold, the money moves to the Central Reserve cities for investment and deposit. Then, when the crop demands approach, the South calls upon these cities for accommodation.

The Middle West has the largest movements of cash within the district in the autumn months, with the peak of both shipments and receipts in October, as shown on Chart II. But the shipments are greater than the receipts, which is impossible within the district itself. This only exhibits the inaccuracy of the statistics, for receipts and shipments within the district are synonymous terms, and it is not possible for one to be greater than the other.

The autumn movements of cash in the Middle West are the results of the country banks recalling their deposits and borrowing from the city banks to meet the needs of the agricultural

classes for moving the crops and stocking the farms for the winter feeding. The shipments for the four year average reached the high peak of \$18,971,000 in October, but the receipts

RECEIPTS, FIG. III



SHIPMENTS, FIG. IV

CHART II.—Average Receipts and Shipments of Cash by Geographical Divisions, 1905 to 1908, Middle Western States.

for the same month only averaged \$11,414,000. This discrepancy is due to the method of collecting the data. The data were obtained from the city banks and, obviously, this is the season when the city banks are making large shipments to country

banks, but the shipments from the country banks to the city banks are very small.

The data concerning the movements of cash between the Western and Middle Western states are very unsatisfactory, as all the reports come from the Middle West. The receipts of cash from the Western states run along very uniformly from month to month, the largest amount being in January, at \$1,911,000, and the smallest in October, at \$1,083,000. Little seasonal variation is shown by these figures in the shipments to the Middle West.

But in the shipments from the Middle West to the West, a distinct seasonal variation is shown on Chart II. The peak of shipments to the Western states is in October, at \$6,893,000.

In the autumn, the shipments to the Western states are primarily for moving the crops. This comes at the time when the Middle West is in need of large sums for the same purposes, but the Middle West is, in a way, a central bank for the Western states; because the Western states have no central reserve city, and the Middle West has two, Chicago and St. Louis. After the crops are marketed, about the beginning of the year, the West sends its surplus cash back to the Middle West to buy supplies, pay interest and debts, and make investments.

The movements of cash between the Pacific and Middle Western states are not charted, because the volume is not large enough. However, the movement from the Pacific to the Middle Western states is heaviest in February, at \$628,000. But the shipments from the Middle West to the Pacific states is heaviest in April, at \$1,904,000. The first quarter of the year is the dull season in the Pacific states, and the currency flows East, to pay for supplies, make investments, and the like. Also, up until March, all the money possible is shipped out of the state to avoid the tax on cash, already cited. But in April the cash is recalled to meet the summer demands, and as a natural reaction after the assessor has made his visits.

The Southern States

The direct movements of cash between New England and the Southern states are negligible, as shown in the discussion under New England.

The movements of cash between the Eastern and Southern states are the largest between any of the geographical divisions and the South. However, the average receipts of cash from the Eastern states seem entirely too small at \$4,239,000, when the vast amount of cotton, tobacco, and other products bought from the South are considered. Of course, prices from 1905 to 1908 did not run up to large sums, as they do now; nevertheless, these figures seem to show evidence of not being representative, although the seasonal variations are shown very clearly. In January, the shipments of cash to the Eastern states are heaviest, at an average of \$1,219,000. This is after the cotton and tobacco crops have been sold, and the holiday season is over. But this movement declines to \$82,000 in March, when the demands for cash for the spring are heaviest. From March, the shipments increase until June, then decline until November. From March until June is the period of heavy buying of spring supplies in the South. From June until November is the period of restricted buying, as the people live on home-grown products. In November, payments for the spring supplies are beginning to be made. The receipts of cash from the Eastern states are heaviest in September and October, when the crops are being harvested and stored. To sum up the movements of cash between these two geographical divisions, during the first half of the year cash flows from the South to the East, and from the East to the South the second half of the year. The receipts of cash from the East are larger than the shipments to the East. This is, perhaps, due to the fact that large shipments of products are made to the East in lieu of cash, and the obligations for cash are settled within the Eastern states.

The movements of cash within the Southern states are, undoubtedly, larger than the tables show. This is accounted for by the incomplete reports due to the failure of banks to respond and the endeavor to secure reports only from the larger cities. The data obtained are not adequate for drawing conclusions.

The movements of cash between the South and Middle West have been analyzed under the Middle West. The data obtained from the Southern states are very incomplete, and do not compare with the same reports from the Middle West. However, by comparing the statistics of the Southern and Middle Western

states, it is observed that the same seasonal variations are exhibited.

The movements of cash between the Western, Pacific, and Southern states are negligible.

The Pacific States

The average movements of cash between the Pacific and other geographical divisions do not afford adequate data to chart. This is due, primarily, to the incomplete reports obtained from the Pacific states' banks. However, there are heavy movements of cash between the Pacific, Eastern, and Middle Western states, as shown in the tables for the latter two divisions. These have been analyzed under the Eastern and Middle states respectively. At this point, a brief summary of the seasonal movements and the reasons for them will suffice.

During the first quarter of the year, the demand for money in the Pacific states is dull, and the impelling force of the March assessment drives the money to Eastern points. Also, at this season, there is a strong demand for Eastern exchange to pay for the holiday purchases. From March to June, the demand for money in the Pacific states increases, due to the adjustment after assessment day; the preparation for the payment of taxes which become delinquent on the last Monday in April;³ the demand for funds by the fruit farmers in preparation for the annual pack, which begins in May; the shipping trade in green fruits, which begins in May; and the opening of the season for long distance fishing trips. From July until November, the demand for cash is very heavy on the Pacific Coast. In November there are heavy shipments of dried fruits to the East, and large receipts of gold are received at the mint. In December the demand for cash slackens; but again, after the first of the year, there is a heavy movement toward the East.

Movements of Cash between Cities

The City of New York (Chart III).—In January, money flows to New York from all the geographical divisions of the country. This movement to New York is the return of the cash from the crop moving, which was begun in December.

³ Statutes of California, 1897, Ch. 267, p. 431, Sec. 3,746.

Consequently, banks in other parts of the country build up the reserves which they had withdrawn during the previous autumn, and money becomes cheap in New York.

In February, the movement of money toward New York is very much less than in January. This reaction is due to the fact that the borrowed funds to move the crops have mostly returned, and February is the month of recuperation after the January settlements, such as interest, dividends, and maturing obligations. Also, February is the month of relaxation after the holiday period. All around, February is an inactive month; traffic is light, the Great Lakes are closed, bank deposits are small, and business takes a breathing spell.

The months of March and April show greater activity and the demand for money advances rapidly. This is a period of active investments and speculation, due to the cheap money in New York, which has accumulated from all parts of the country. At this time, travel revives, transportation facilities are more active, farmers' associations buy their spring supplies, merchants make payments for their spring supplies, and the payment of taxes, Government receipts and April dividends absorb large sums in cash.

June and July show a very weak money market, due to the hot summer, the vacation period, and the anticipated demand for cash in the interior to move the crops.

From July on, the money market tightens. This is the period when banks from other sections of the country call for their deposits in New York City banks for the crop moving. At this time, there is a tendency for gold to flow to this country, and the Government deposits its treasury hoards in national banks.

From October to the end of the year, the demand for money in the interior declines, and by December the movement from the interior toward New York is rapidly increasing. But the demand for the holiday season causes the money market to tighten up toward the end of the year.

These movements of cash to and from New York, as described, show five major and several minor cycles, which may be traced very clearly on Chart III.

The City of Chicago (Chart IV, Figs. VII and VIII).—Like New York City and the Eastern states, the movements of cash

to and from Chicago are repetitions of the movements between the Middle Western and other geographical divisions.

The shipments and receipts of Chicago show the same five major seasonal cycles as New York, and the economic causes are identical. There are minor cycles which are due to local

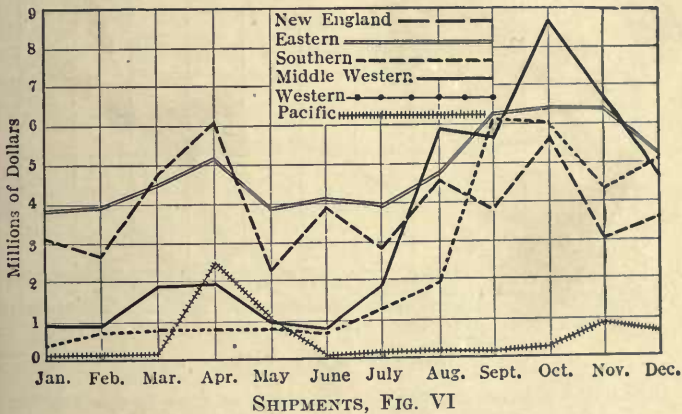
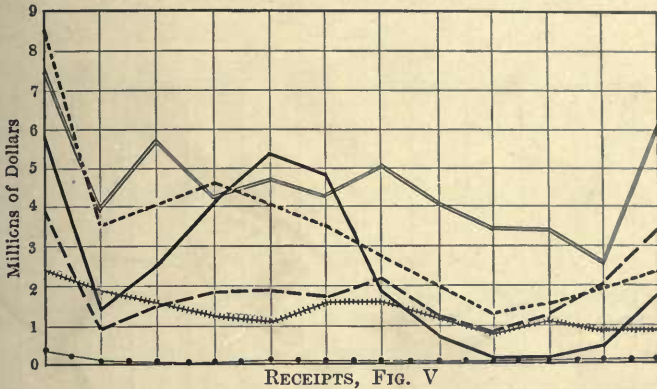


CHART III.—Average Receipts and Shipments of Cash by Geographical Divisions, 1905-1908, City of New York.

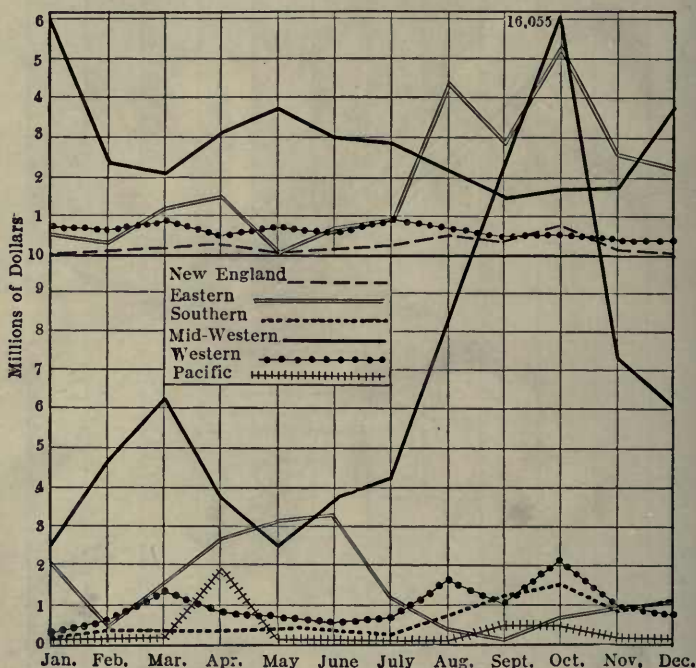
peculiarities, but even the principal minor cycles in the movements of currency to and from New York, Chicago, and their respective geographical divisions correspond.

The March peak of shipments from Chicago is primarily due to the demand in the rural districts. March is the month of large transfers of agricultural lands, the payments on mort-

gages and interest on farm loans, the renewal of leases, and the purchase of equipment for the spring planting. The effect of these transactions upon the movement of cash from Chicago is illustrated by the high peak in March shipments of cash to the Middle West.

The October peak needs little explanation, as it corresponds

RECEIPTS, FIG. VII



SHIPMENTS, FIG. VIII

CHART IV.—Average Receipts and Shipments of Cash by Geographical Divisions, 1905 to 1908, City of Chicago.

with the October shipments from the Middle West, Chart II, and from New York, Chart III, which have been explained. The economic reasons are practically the same in each movement. The March and October shipments of cash to the interior, therefore, admirably illustrate the movements of cash to the producing interests at times of need, as an antithesis to the movement to the cities in January, May, and December.

Why these movements of cash from one part of the country to another? They are the results of the natural desire of the owners and users of the cash at different seasons of the year. In view of the explanations which have been made, only a brief statement will be necessary here. The principal item of cash is the savings of individuals. These savings accumulate in the local banks as deposits. The local banker pays interest on these deposits and loans them out to borrowers or invests them. When the local interests need cash, they call upon their local banks, the local banks in turn call in the deposits which they have made with their city correspondents, who perhaps sell securities in which they have invested, and the money is shipped back to the local community for the use of its original possessor. This is what is happening in March and October, when large shipments are made from Chicago and New York to the interior or country banks. Then, in January, May, and December, when the local bills have been paid and crops sold, the recipients of cash are making bank deposits, paying their obligations, buying new supplies, and making new investments. This carries the money back to the principal cities, until the local activities need it again.

The City of St. Louis.—The movements of cash between St. Louis and the geographical divisions of the country is a part of the general movement to and from the Middle West. The movements of cash between St. Louis and the Southern states stand out prominently. When the movement is compared with the general movements of cash between the Middle West and the Southern states, and Chicago and the Southern states, it is clear that the Southern states do their largest banking business through St. Louis. The average annual receipts of cash by St. Louis from the Southern states is \$15,354,000, and the shipments to the South \$29,054,000, while the average receipt in Chicago from the South is only \$1,935,000, and the shipments to the South \$6,869,000.

This is perfectly logical for St. Louis to handle more of the South's cash than Chicago, because St. Louis is one of the three central reserve cities, and nearer to the South than Chicago; but both St. Louis and Chicago combined do not compare with New York as a banker for the South.

The heavy receipts of cash from the South are made during the first half of the year and December. The peak for the four year average is in January, at \$2,576,000. The reasons for these shipments to St. Louis are the same as have been explained for the Middle West and New York. Some minor differences, creating minor cycles, exist because of the proximity of St. Louis to the South; but the movements of cash between St. Louis and the South exhibit the same major cycles at about the same time as the movements of cash between the South and Chicago, and New York. During the second half of the year, heavy shipments of cash are made from St. Louis to the Southern states.

The movements of cash between St. Louis and the other geographical divisions, are a part of the general movements of the Middle West and show the same seasonal cycles. St. Louis accommodates a large rural population in the wheat, cotton growing, and live stock feeding districts in the Southern Mississippi Valley states.

CHAPTER VIII

TOTAL MOVEMENTS OF CASH

These totals are, in a way, a summary of the receipts and shipments of cash by the separate geographical divisions, only they are more varied and less exact movements. The totals are made up of all the shipments and receipts of geographical divisions from 1905 to 1908, divided by four, giving an average of the annual movements of cash. Averages in themselves obscure the truth for any particular case, and, even more, totals distort the truth from any specific information. However, they do show tendencies which are theoretically suggestive for general purposes.

The receipts of the Eastern states show six general cycles, three rising and three falling. In January, the receipts are very heavy, due to the natural return flow from the crop-moving, the holiday settlements, the first of the year investments, the payment of debts, and the like. In February, there is a sharp decline in receipts, as a natural relaxation from the holiday period and the new year settlements. From February the curve of receipts rises until May. This is primarily due to the March and April settlements of contracts, rents, the payment of interest and dividends, and the payment for spring supplies by merchants. From May until September, the receipts decline sharply. These are the dull months of the hot summer, when the agricultural communities are using large amounts of cash in making and harvesting crops; therefore, cash begins to flow from the cities, and continues up to almost the end of the year. In October, there is a slight increase in receipts, precipitated by the payments of interest and dividends, merchants' October settlements, and the purchase of new supplies from the East. But the October rise is counter-balanced by a decline in November, while the crops are being marketed. In December, the Eastern receipts of cash increase in large amounts. At this time, the crop moving is about over,

the Great Lakes are closed to traffic, and the Christmas buying from the East is in progress. This increase in receipts continues through January, as explained.

The New England receipts are heaviest in March, April, and October. These peaks are due to similar conditions. In March and April, jobbers from all over the country are making heavy remittances to New England shoe and textile manufacturers. In October, the shipments of cash to New England are also the result of remittances from jobbers in other parts of the country for shoes, dry goods and the like. The shipments are almost entirely from New York, because settlements from other parts of the country are made through New York bank correspondents. In February, May, July, and November, the New England receipts of cash decline very rapidly. These are off months, when the sales of manufactured goods are at their lowest ebb. The New England curve of receipts shows a more zig-zag movement than any of the other geographical divisions, perhaps due to the fact that the bulk of products sold from New England are manufactured products, and the collections are systematized.

In many respects, the receipts of cash by the Middle West for the first quarter of the year are similar to those of the Eastern states, and are based on the same economic reasons. In January, the receipts are very heavy, but in February they decline quickly. In March, the receipts in the Middle West have a sharp upward movement due to the buying from the rural districts, the spring payments of mortgages, and the like. After March, the receipts decline until June. This is a period of little borrowing in the rural districts; but in July, when the crops in the Southwest begin to move to market, an active demand for money in the rural districts begins, and continues steadily upward until the high peak for the year is reached in October. During these months, the Middle Western banks call in their deposits from Eastern correspondents, dispose of securities and borrow heavily to secure the necessary cash for their country clientele.

In November, when the crops have been marketed, or largely contracted for, and the farmers have received their pay, cash flows from the country back to the cities for investment. Con-

sequently, the receipts of the Middle West decline sharply in November, and the shipments to New York and the East increase. In December, the receipts increase heavily, due to the inflow from the country districts, for deposits, investments, and the buying for the holiday season.

The receipts of the Southern states show an increase in April and May for the same reasons pointed out for other geographical divisions. In June, the receipts decline, a sort of reaction against the demands of the previous months. By July, the Southern grain crops, fruits, and vegetables, begin to move. This starts cash flowing South, in payment for these products. But the movement of cash is heaviest in September and October, when the cotton and tobacco crops are being harvested and marketed. However, it is interesting to note that the receipts of the South do not compare with the receipts of the Middle West.

The receipts of the Pacific states are largest in the autumn for the crop-moving, particularly the grain and fruit crops. The receipts begin to increase in September, and steadily move upward, until the end of the year. In this particular, the Pacific states differ from other geographical divisions. But the Pacific states are somewhat isolated from the rest of the country in matters of finance. The receipts and shipments to this division are very small. In view of the fact that Californian products, particularly fruits, are used in large quantities, aggregating large values in all the other geographical divisions, it seems that the Pacific states and the East transact more business by clearing exchange bills through correspondents than other geographical divisions.

Total Shipments by Geographical Divisions

The shipments of geographical divisions are as varied as receipts, and sometimes they are a part of the same movement within the district following receipts immediately. Such is the case of the receipts in the Middle West from the East. The Middle Western bankers call in their deposits from their Eastern correspondents in the autumn, for the sole purpose of re-shipping the receipts to country banks. At any rate, a shipment from one district is always a receipt in another. These

facts account for the coincidence of a heavy increase or decrease in both shipments and receipts during the same month in the same division, or in two or more divisions.

The January shipments in the Eastern states are rather large, but much less than the receipts, for the reasons explained under the total receipts. The shipments are, perhaps, almost entirely for the payment of interest, dividends, and indebtedness contracted during the holidays. In February, the shipments decline sharply, as do the receipts, and for the same reasons. In March, the shipments increase sharply and continue up to the spring peak in April, due to the same causes enumerated for the increase in receipts during this month, except the shipments are in response to the demands in other districts, and particularly the agricultural districts, which, at this season of the year, have a large volume of cash turnover for the payment of mortgages, interest, rents, and for the purchase of supplies, for the spring planting. In May, the shipments from the Eastern states decline rapidly, while the receipts increase, for the reasons pointed out under receipts. From May until July, the shipments move up slowly in response to the anticipated demand for the crop moving. In August, the shipments move up sharply, reaching the annual peak in September and October. During these months, the receipts decline to the lowest points for the year. A long explanation of these movements would be a repetition of what has already been said. It suffices, therefore, to say that these are the months when shipments are being made from the East to all the agricultural districts for moving the crops. In November and December the shipments from the Eastern states decline sharply, and the receipts increase. This is a logical turn of the movements of cash indicating the completion of the crop movements, the increase of deposits in the local banks, the payment of debts in the East, the purchase of winter supplies, and the preparation for the holiday season.

The shipments by the New England states show the two principal peaks in March and September. These are the months when the textile mills are purchasing large supplies of cotton and wool, and the shoe manufacturers, leather. The shipments from New England are more even throughout the year than

the receipts, perhaps due to the buying of the manufacturers being more systematized than that of the jobbers and wholesalers.

The Middle Western shipments are less pronounced in January than the receipts, as would be expected. In February, the shipments decline for the same reasons pointed out for the Eastern states. In March, the shipments increase and reach a peak corresponding to the April peak in the shipments from the East, and for the same reasons, only the peak is reached earlier in the Middle West than in the East. However, the increase in receipts from the East in March is practically the same as from the Middle West; but in April, the shipments of the Middle West decline, while the Eastern shipments increase even more than in March, and reach the second highest peak of the year. This is due to the payments of quarterly dividends maturing April first. The stocks are held in all parts of the country and payments are, for the greater part, made from New York, or in New York exchange, while in the Middle West the spring demands of the farmers are subsiding. In May, the shipments of the Middle West decline, but much less than the shipments of the East. During May, the receipts from the Middle West continue to increase in the East and South, due to the Middle Western merchants settling their Eastern accounts and laying in fall supplies, and the movement of the Southern vegetables and fruits to market.

In June, the shipments of the Middle West reach the highest point during the first half of the year. This is in response to the demands for harvesting the grain crops in the Southwest, and the movement of the last of the old crop to market. In July, the shipments decline, while the receipts increase. Why the shipments of the Middle West decline in July, the writer is unable to explain, except on theoretical indications. July is the dreaded hot month of the year throughout the Middle Western and Southern states, and farmers do as little work as possible during this month. However, in anticipation of the crop moving, which begins in July, the bankers begin calling in their deposits and the receipts of the Middle West increase in July. In August, both shipments and receipts mount upward and reach the peak of the year in October, at \$37,844,000 and

\$23,873,000, respectively. October is the peak month of the crop moving, when the Middle Western bankers make heavy demands of their Eastern correspondents and loan to their agricultural clientele. From the October peak, the shipments decline until the end of the year, indicating that by October the financing of the crop movement is about completed. In November, shipments decline, but much less than receipts. In December, the shipments continue to decline, while the receipts show a marked increase, indicating that the withdrawals of the South, West, and the rural districts are beginning to return, after the crops have been marketed.

The shipments of the Southern states are highest in January, the peak being a continuation of the upward movement which starts in November. In February and March, the shipments decline and then increase in April and May. The somewhat regular movements of currency from the Southern states is perplexing to the casual observer. This regularity is due to the purchase of provisions from the Middle Western and Eastern states, which is a continuous process by the South. Shoes and clothing are purchased from New England and New York. Meat, grain, fruit, and dairy products are purchased from the Middle West and the North.

The shipments of the Pacific states are light and regularly on the decline from January to May. In June the shipments reach the highest point. This is after the orange crop has been harvested, and the funds move East to pay for supplies and to make investments. In July, the shipments decline, but from July to October the plane of shipments is inclined upward. November and December, the shipments decline and the receipts increase, to move the grain and fruit crops.

Total Receipts of Cities

The total receipts and shipments of the cities of New York, Chicago and St. Louis are virtually repetitions of the receipts and shipments of the Eastern and Middle Western states, and the totals for these respective divisions, with the exception that the volumes of the movements are less. This is due to the fact that movements to and from these cities do not comprise all the cash shipped to and from the geographical divisions; but it is

actually surprising, what a large proportion of it they do furnish. This is not fair to either the geographical divisions or the cities, because the data was collected from the larger cities and thus did not include the transfers to and from the numerous small cities, which, if they could be taken into account so as to include the shipments to the large cities for reshipment to the country towns and banks, would aggregate a much larger amount than that of the larger cities.

The receipts of the Eastern states and New York City take almost precisely the same trends during the same months. The receipts in the East are larger than those of New York. The March receipts of the East advance a little more sharply than those of New York, perhaps due to the settlements through such cities as Pittsburgh and Philadelphia. The July decline in receipts is much heavier in New York than the East, for the same reason. The November decrease in receipts is larger in the East than in New York, due primarily to the return of deposits by correspondent banks after the crops have been marketed. Otherwise, the seasonal trend of these two curves duplicate each other.

The receipts of both Chicago and St. Louis are included in those of the Middle Western states. But, if they were both added together, they would not equal the receipts of the Middle Western states, because receipts of the correspondent banks in other cities, as St. Paul, Minneapolis, and Kansas City, are omitted. The only variations in the secular trend of the Chicago receipts from the Middle Western states are in April and September. In April, the total receipts of Chicago increase, while those of the Middle West decrease. This is, obviously, the flow of cash to Chicago for investments, deposits, and purchases, after the March settlement of rents, interest, and mortgages in the rural districts. In September, the receipts of Chicago decline, while those of the Middle West increase. This is the season when the agricultural classes need all the money they can get to harvest and market the crops; therefore, country banks are drawing all the cash possible from the Chicago banks, and sending little to them. At other times, the seasonal variations correspond; except that the volume in the Middle West is larger

The total receipts of St. Louis are as varied as those of New England. The heaviest receipts are in January, October, and December, when the cash which had been used for moving the Southwestern grain and cotton crops is returned from the farms.

Total Shipments of Cities

Like the total receipts, the total shipments of the cities are virtually a duplication of the total shipments for the respective geographical divisions. The shipments from New York City do not decline as sharply in February and May as those from the Eastern states. This is due to the payment of dividends, interest, and maturing obligations through New York. At all other points, the seasonal trends of the two curves are alike, and the explanation given for shipments from the Eastern states applies to New York City.

The shipments from Chicago vary in general trend from those of the Middle Western states in February and May. In February, the shipments of Chicago increase while those of the Middle West decrease. The increased shipments from Chicago are due, perhaps, to the February payments of interest, dividends, and maturing obligations, the payment of balances on holiday supplies from the East, and the adjustment with their Eastern correspondents of the deposits of Chicago banks, which were depleted for the autumn crop moving. In May, the decline of the shipments from Chicago is more pronounced than those of the Middle West, due to the decline in mercantile activities during May. At all other points, the two curves bear a seasonal correlation, and the economic causes are the same, so far as it is possible to analyze them from the data available.

The total shipments of St. Louis are part of the Middle Western shipments. The lowest point is reached in April, and the highest in October. April is the month of low shipments, as a reaction against the March settlements. From April to October, the total shipments increase each month. The shipments are large enough to be noticeable in July; this is the beginning of the crop moving period in the Southwestern grain districts. First, after the wheat, the corn is harvested, and then the cotton. This accounts for the steady rise in the shipments

of St. Louis from June to October. In November and December, the shipments decline very rapidly, and receipts increase, due to the sale of the crops and the return of the country banks' deposits to the St. Louis banks.

PART III

SHORT-TERM CREDIT FOR AGRICULTURE
UNDER THE FEDERAL RESERVE
SYSTEM

CHAPTER IX

SHORT-TERM CREDIT

In the brief investigation of the short-term agricultural credit conditions under the national banking system, it was found that the chief restraining influences were legal restrictions, lack of adequate organization and intelligent national coöperation among the banks, scattered reserves, the centering of loanable funds in New York, and economic and social barriers inherent in the very nature of American agriculture.

The national banking legislation did not discriminate against agricultural short-term credit. When the system was established, short-term credit for farmers was not a serious problem. The farming business was diversified and the agricultural classes were, in a large measure, self-sufficient. What local needs for short-term credit arose were probably very well cared for by the state banks.¹ But it was necessary to suppress state bank and other forms of note currency, in order to accomplish the second and most important purpose of the National Bank Act, which demanded a uniform currency. But why were these needs of the rural communities overlooked in the national system? Obviously, the character and magnitude of these needs were not felt until the local note currencies began to disappear. Then we observe the endeavors to meet the needs of the country by the apportionment of notes "according to the representative population," and "with due regard to banking capital, resources, and business,"² the issue and distribution of additional notes,³ the withdrawal of notes from states having more than their allotment, and the redistribution to states having less than their share,⁴ the reduction of bond deposits required of national banks

¹ State banks, private banks, individuals and corporations had issued notes to meet local needs. These were taxed out of existence by the national banking laws.

² Act of March 3, 1865. 13 Statutes at Large, 498.

³ 16 Statutes at Large, pp. 251, 1870.

⁴ National Banking and Currency Act, Sec. 21.

to \$50,000,⁵ and like measures, from time to time, until the Act of 1900, which reduced the capital requirements for national banks in rural districts to \$25,000. This brought the national banks within reach of the agricultural classes; later, the Federal Reserve Act of 1913 made special provisions for agricultural paper.

These various endeavors to meet the needs which we have not reviewed in detail, were unsuccessful until 1913. The failures occurred because the relief measures were only of temporary consequence, and did not provide for the growing needs of the country, or the rural communities; consequently, from about 1870 down to the Federal Reserve Act, the crop moving created an annual plethora of currency, and strained every existing credit facility. Before the Act of 1900, banking facilities were inadequate in the rural districts to build up the practice of deposit currency among the agricultural classes. The rural population was, therefore, unacquainted with sound banking practices and distrustful of checks; and the inevitable practice of making most payments in coin, or some form of bank notes, was followed. The farmer had to pay his hired labor with cash, and generally the local merchants demanded currency. This made it necessary for the farmer to demand currency for the products he had to sell; consequently, the annual marketing of crops was a drain upon the liquid assets of the entire country, once each year. Moreover, these payments made to farmers for their crops did not find their way into circulation again for some time, because the farmer received his annual income often in a lump sum, but his expenditures were spread throughout the year. This required the hoarding of large sums for paying wages, buying feed and spring supplies, and making payments on a mortgage. The weight of this burden was felt by every business, and justly, Mr. S. S. Pratt says, in his excellent book, "The Work of Wall Street," that "an anxious period in the money market is the crop moving time." An elastic currency that would meet the short-term credit needs of agriculture was one of the first banking reforms demanded by public sentiment.

When the national banking system was organized, more than

⁵ Act of June 20, 1874. 18 Statutes at Large, 1123.

half of the country was undeveloped and uninhabited by civilized men. The development of this new territory required long and short-term financing. Legally, the long-term financing was beyond the scope of the national banks and short-term financing of the new agricultural regions was speculative, and inaccessible to the facilities of the national banks. The capital and population requirements for the organization of a national bank, and the lack of branches, excluded the national system from supplying either the loan funds or the banking machinery for the rural communities. The absence of the banking machinery made it impossible to gauge the savings of the agricultural classes, or accumulate these savings for supplying the local credit needs.

Each succeeding crisis demonstrated the inability of the banking system to withstand emergencies and maintain any reliable service for the country districts. This was due to the following facts, viz.: each bank was a separate and independent unit; the reserve requirements were inflexible; the reserves were scattered; and the expansion and contraction of the note currency were inverse to the demands of the country in periods of panic. The panics of 1893 and 1907, particularly, emphasized the injustice of the banking organization to the non-speculative interests.

The panic of 1893 was responsible for the investigation by the Indianapolis Monetary Commission; and the panic of 1907, the Aldrich-Vreeland Act and the National Monetary Commission and, ultimately, for the Federal Reserve Act. The report of the Indianapolis Monetary Commission was instrumental in bringing about the Act of 1900, which formally recognized the gold standard; authorized the organization of national banks with a capital of \$25,000 in towns of not more than 3,000; and provided for the issue of notes up to the par value of the bonds deposited.

Among the fundamental criticisms of the national banking system by the Indianapolis Monetary Commission were: (1) the failure to provide currency to meet the growing needs of the country; (2) the lack of the qualities of expansibility and contractibility of the currency; (3) lack of proper distribution of loanable capital; and, (4) unequal interest rates and note

issues, and the inadequacy of a Government bond secured currency. Doubtless, the suggestions made by the Commission would have received further consideration, had the Spanish-American War and the return of prosperity in the form of rising prices not intervened. However, the Act of 1900 enabled the national banks to reach further into the rural districts and immediately, as we have seen, the number, capital, circulation, loans and discounts, and deposits of the national banks, by states and geographical divisions, increased. But the circulation, including the savings of the rural districts, continued to flow to New York and, in times of crises, each country bank stood alone as an independent unit.

Among other things, the National Monetary Commission criticized the banking system for, (1) the scattered reserves, immobile in times of trouble, the proper uses of which were restricted by antiquated state and Federal laws; (2) inability of the banks to replenish reserves in times of need; (3) inability to expand and contract the note issue according to the country's needs; (4) lack of coöperation on the part of banks to protect their own and the public's interest in the times of crises; (5) the nation-wide, ineffective system of domestic exchange; (6) lack of standardized commercial paper; (7) limited discount market and the consequential drawing power of New York for the country's reserves; (8) dependence of country banks and the disadvantages for the farmers and others; (9) inequality in credit facilities, interest rates, etc., in different sections of the country; and (10) absence of any agency to secure equal accommodations throughout the country. After the investigation of the National Monetary Commission, study and debate of the banking system continued until the passage of the Federal Reserve Act in 1913,—fortunately, this step was taken before the crisis of the World War.

The causes which led to the incorporation in the Federal Reserve Act of special provisions for agricultural credit were an amalgamation of the economic, political, industrial, and social problems which had grown up out of the handicaps of the national banking system. What concern has this with our problem? It is necessary to know the broad, fundamental problems affecting agriculture and banking, of which our eco-

monic and political society must be cognizant, in order to comprehend the scope and possibilities of agricultural credit provisions. Banking had been divorced from the cheap money faddists by the defeat, for the first time, of William Jennings Bryan and "free silver," in 1896. And, with the exception of the annual plethora of currency for the moving of crops, the banking situation seemed more at ease after the reduction of the capital requirements of national banks in the rural districts, the legal establishment of the gold standard, and the bond par note issue privilege. But the panic of 1907, while essentially a bankers' panic, more clearly than ever before demonstrated the inadequacy of the scattered bank reserves, the inelastic note issue, and the inability of the credit and currency of the country to move to sections where needed by "essential" industries.⁶

Simultaneously with, and possibly stimulated by the agricultural depression accompanying the panic, the problems of rural credit moved into the political, economic, and social arena; and the growing magnitude of agricultural organizations, improved transportation and communication, made the farmer a more important factor in our national life than a mere grower of crops. Individuals, organizations, and political parties blatantly turned their guns of advice upon the farmer, and the endeavors to better rural conditions became a social fad.

The Country Life Commission appointed by President Roosevelt made its report in 1910, which stated, as one of the most pronounced deficiencies of country life, "the lack of any adequate system of rural credit, whereby the farmer may readily secure loans on fair terms."⁷ The Aldrich National Monetary Commission had completed and published its investigations into the monetary systems of various countries. In these reports, the financing of agriculture in European countries is emphasized, particularly in its relation to the national banking systems.

⁶ I say "essential" entirely mindful of the ambiguity. Who knows what is essential and what is not essential? Doubtless, few individuals, who aspire to social or political positions where these problems must be considered, are so lacking in judgment and discretion that they would attempt to draw these lines of demarcation with anything more than the broadest generalities.

⁷ Report of the Commission as reprinted by Sturges, Walton & Co., p. 20.

Sir Horace C. Plunkett had just published in this country, in 1911, his interesting book, "The Rural Life Problem of the United States,"⁸ which gave a sweeping sentimental stimulus to rural activities. Also, during 1911 the American Bankers' Association appointed a committee to study the financing of agriculture. In 1912, B. F. Harris, an eminent banker and farmer of Champaign, Illinois, and Chairman of the Agricultural Committee of the American Bankers' Association, said, in an address on "Problems of Rural Life from the Bankers' Standpoint,"⁹ delivered at Chicago before the Chicago Bankers' Club:

"As our farmers put in practice the better and more permanent methods of agriculture which we are so vitally concerned in seeing them adopt, knowledge of which we must help carry to them, we may and must further serve them in the matter of improved farm financing systems. . . .

"We have, will and should rise to the demand and opportunity to provide plans and agencies for the great agricultural financing proposition that impends.

"The American farmer uses hundreds of millions of dollars of bank credit every crop season.

"This financial task exceeds that of fifty years ago, when our great railroad construction required thousands of millions.

"Seven dollars per acre for fertilizers to restore or maintain one hundred million acres of worn lands over each five-year period would require upward of three and a half billion dollars.

"The present per acre investment in farm machinery ranges from three to seven dollars, and the increased investment in this direction for better methods, for proper economy, and to make up for the shortage in farm labor, until the farm population is built up, will require upwards of two billions of dollars more. . . .

"In the ten years following 1899, production of cereals in the United States increased 1.7 per cent, but the market values were higher in 1909 by 79.8 per cent, the increase in price being forty-seven times the increase in quantity.

"In the last ten years, the average price in the United States of products of the farm has increased 87 per cent, although the increase in the average price of all commodities, including agricultural products, has been but 23 per cent. . . .

⁸ Macmillan Co., Publishers.

⁹ Union Stock Yards Trust Co., Publishers.

"In 1900, there were exported from this country breadstuffs amounting to \$251,000,000; but in 1910, these exports had fallen to \$136,000,000 and imports increased \$13,000,000.

"These alarming figures clearly indicate that the industry of soil cultivation in the United States has fallen back decidedly, as related to the increase in population and augmented demand.

"A recent census bulletin states: 'It is only by reason of a great reduction in the exportation of agricultural products that the increasing consumption of the country has been supplied.'"

Whether we agree with Mr. Harris or not, these statements, coming from a man with his leadership in banking and public life, had an inestimable influence in compelling a consideration of the financial problems of agriculture in the campaign for banking reform.

At the same time, the daily press, the agricultural press and the monthly periodicals were teeming with plans to improve rural conditions. Extension workers and social leaders were making the betterment of rural life and rural credit improvement a part of their propaganda.

In October, 1912, President Taft sent a letter to the Governor of each state, in advocacy of agricultural credit legislation, in which he said: "The need for the establishment of an adequate financial system, as an aid to the farmers of this country, is now quite generally recognized. The Governmental initiative, taken by the Department of State under instructions issued by my direction to the diplomatic officers in Europe on March 18 last, have been effectively supplemented by the American Bankers' Association, the Southern Commercial Congress and by many other bodies by whom this question has been agitated, and valuable work has been done in studying and disseminating knowledge of those great instrumentalities, which have been created in foreign lands to extend to their agricultural credit facilities equal in benefits to those enjoyed by their industrial and commercial organizations. The handicap placed upon the American farmer through the lack of such a system and the loss sustained by the whole citizenship of the nation because of this failure to assist the farmers to the utmost development of our agricultural resources, is readily apparent."

This was on the eve of the break in Republican power. On

the morning of the Democratic rule, the banking system remained unreformed, regardless of the fact that the platform promises were those of legislation for bettering rural conditions, including improved facilities for financing agriculture.

H. P. Willis, then employed by the Hon. Carter Glass as a monetary expert, had been Secretary to the Indianapolis Monetary Commission of 1897-98. This Commission made a careful study of the financial system, and, among its principal findings, were the inadequate facilities for financing agriculture. Mr. Willis was the expert in drafting the Federal Reserve Act and, in company with Mr. Glass, had many conferences with President Wilson regarding the bill. There seems little probability that Mr. Willis was not influenced by his former experience with the Indianapolis Monetary Commission, which was inspired mainly by agricultural interests, and their investigation emphasized particularly the adverse adaptability of the existing banking accommodations to agriculture.

The causes which impelled the incorporation of the short-term agricultural credit provisions in the Federal Reserve Act may be briefly summarized as follows:

1. The need of an elastic currency for agriculture had stood out for a half century as the greatest weakness of the national banking system. The satisfaction of this need was demanded by public sentiment, and no banking reform would have met with general approval that did not take into consideration the financial needs of agriculture, when more than half of the population, directly or indirectly, depended for their money income upon agriculture.

2. Political expediency demanded it. For two successive political campaigns, the two principal political parties had included in their platform promises the bettering of rural life conditions, including "rural credits" or "agricultural finance."

In 1908 the Republican platform stated in the Currency clause, that we must have a "more elastic and adaptable system to meet the requirements of agriculturists, manufacturers, merchants and business men generally, which must be automatic in operation, recognizing the fluctuations in interest notes."

The Democratic platform of 1912, under the heading of a special paragraph entitled "Rural Credits," said: "Of equal

importance with the question of currency reform is the question of rural credits or agricultural finance. Therefore, we recommend that an investigation of agricultural credit societies in foreign countries be made, so that it may be ascertained whether a system of rural credits may be devised suitable to conditions in the United States; and we also favor legislation permitting national banks to loan a reasonable proportion of their funds on real estate security."

What would the ecstatic, successful political party do? It must fulfill its promises, if for no other reason than to show the unfaithfulness of the outgoing party. Any new banking legislation which did not include agriculture would have hopelessly lost the confidence of the agricultural public, whose organized votes were growing powerful. The new party was too watchful of its political promises and future interest to let this default occur while the campaign speeches were still being read. So the agricultural credit provisions were inserted in the Federal Reserve Act, including almost verbatim the last sentence in the "Rural Credits" plank of the Democratic platform, which sentence deals with mortgage credit,¹⁰ and is eliminated from this study.

3. Equality in banking was demanded because of the dominance of agricultural interests, and the flagrant evidence of inequality in banking for the agricultural classes under the national banking system. Any reform which did not provide for agricultural credit would have been hailed as capitalistic.

4. Country banks would not join the system unless adequate provisions were made for agriculture. The many thousands of country banks were a necessary and integral part of a national system of finance, because they accumulated the savings of the most thrifty half of the population, served the fundamental industry of agriculture, and, in the aggregate, represented a large portion of the nation's wealth.

¹⁰ The original Federal Reserve Act, 1913: "Any national banking association not situated in a Central Reserve city may make loans secured by improved and unencumbered farm land."

Loans are limited to 5 years; 50 per cent of property value; 25 per cent of the bank's capital and surplus, or one-third of time deposits.

CHAPTER X

PROVISIONS FOR SHORT-TERM AGRICULTURAL CREDIT UNDER THE FEDERAL RESERVE ACT, AND THE INTERPRETATION OF THEM

The Federal Reserve System

The Federal Reserve System represents all national banks and a large number of the state banks, and trust companies. The banks which are members of this system may rediscount short-term agricultural paper at their respective Federal Reserve Bank. The provisions of the Federal Reserve Law, and the rulings and opinions of the Federal Reserve Board and Council on the discount and rediscount of agricultural short-term paper by the Federal Reserve Banks and member banks, if carried out, will practically eliminate all the barriers which have heretofore separated the bankers and the farmers with respect to short-term credit. In fact, the terms of the law and the regulations of the Board are exceedingly liberal.

Short-term Agricultural Provisions under Federal Reserve Act

The Federal Reserve Law¹ provides that "the Federal Reserve Banks may rediscount notes, drafts and bills of exchange issued or drawn for agricultural purposes or the proceeds of which have been, or are to be, used for such purposes, the Federal Reserve Board to have the right to determine or define the character of the paper thus eligible for discount, within the meaning of this Act." It also provides that "notes, drafts, and bills of exchange secured by staple agricultural products are eligible for rediscount"; that "notes, drafts, and bills drawn or issued for agricultural purposes or based on live stock, and having a maturity not exceeding six months, exclusive of days of grace, may be discounted in an amount to be limited to a percentage of the assets of the Federal Reserve Bank, to be ascertained and fixed by the Federal Reserve Board."

¹ Section 13, paragraph 89.

The Federal Reserve Board, in explaining the scope of these provisions for short-term agricultural paper, gave a definition of six-months' agricultural paper as follows:²

a. Definition.—Six-months' agricultural paper, within the meaning of this regulation, is defined as a note, draft, bill of exchange, or trade acceptance, drawn or issued for agricultural purposes, or based on live stock; that is, a note, draft, bill of exchange, or trade acceptance, the proceeds of which have been used, or are to be used, for agricultural purposes, including the breeding, raising, fattening or marketing of live stock, and which has a maturity at the time of discount of not more than six months, exclusive of days of grace.

b. Eligibility.—To be eligible for rediscount, six-months' agricultural paper, whether a note, draft, bill of exchange, or trade acceptance, must comply with the respective sections of this regulation, which would apply to it if its maturity were ninety days or less.

The provisions, together with the liberal interpretations which have been made by the Federal Reserve Board and Council, take care of almost all ordinary short-term credit needs of agriculture, including the planting, cultivating, harvesting and moving of crops; the breeding, raising, fattening and marketing of live stock; the purchase of dairy cows, farm machinery and equipment, fertilizers, feed, seed, or any product to be used for agricultural purposes and for general working capital.

Not only have the member banks of the Federal Reserve System been encouraged to extend credit to farmers for productive purposes, such as for the growing and marketing of crops; but, in the opinion of the Federal Reserve Council, "When the farmer makes his note payable to the member bank and uses the proceeds for an agricultural purpose, such a note may likewise be discounted by a Federal Reserve Bank as agricultural paper."³ This is a very valuable ruling, which stimulates the use of farmers' notes as a banking instrument and also encourages the production of agricultural products. Such a clause is especially valuable to provide for the recurrent needs of agriculture, to hire labor to harvest, move, and market crops every autumn. In case a local member bank in the grain or cotton growing sections accumulates more first-rate farmers' notes than it cares to hold with the demands for funds, it can rediscount these notes at its respective Federal Reserve Bank, and

² Regulation "A" of the Federal Reserve Board: Series of 1917, VI.

³ Federal Reserve Bulletin, April, 1918, p. 310. Informal Ruling of the Federal Reserve Council.

obtain in return 100 per cent in Federal Reserve notes. This enables banks, in the one-crop communities, to provide the funds needed by agriculture each harvest. Also, if the farmers are shrewd and so inclined, they can use this credit for wise market purposes. For the most part, farmers have been compelled to market their crops almost as soon as they are harvested, in order to obtain funds to pay for production and harvesting. So many farmers do this that the autumn wholesale prices are usually the lowest of the year. Farmers who market their crops at this season, when the demand is over-supplied, receive the lowest wholesale prices and in the spring, when they have to buy, money is usually plentiful, and they are compelled to pay the highest retail prices for their purchases to produce another crop. Proper credit to tide agriculture over these recurrent seasons of rise and fall in prices will not only be beneficial to farmers in their market operations, but equally so to all consumers and all other businesses by the stabilization of prices.

The credit needs of live stock farmers are fairly well provided for in the Federal Reserve banking system. For a long time cattle loan companies organized in connection with national and state banks have been doing an extensive business financing live stock farmers. Some banks in cattle-growing communities have made so many loans to farmers on live stock that they have become known as "Cattle Banks," or "Live Stock Banks." Local banks take care of a large portion of the cattle loans made in the intensive farming sections of such states as Missouri, Iowa, Illinois, Oregon, Michigan, Ohio, and Indiana. For the states where more extensive farming is done, as Arkansas, Nebraska, Texas, Oklahoma, Colorado, New Mexico, Montana, Wyoming, and Arizona, cattle loan companies secure the larger portion of the business. One of the best known of these companies is Clay, Robinson & Company, Chicago, with branches at South Omaha, Nebraska; Kansas City, Missouri; Denver, Colorado; South St. Paul, Minnesota; East Buffalo, New York; East St. Louis, Illinois, Fort Worth, Texas; and El Paso, Texas. These companies loan hundreds of millions of dollars annually on feeder live stock for the purposes of feeding, grazing, and getting them in market condition.

The drafters of the Federal Reserve Act recognized the im-

portance of the live stock industry in this country, and wisely provided for the discount and rediscount of notes, drafts, bills of exchange, and trade acceptances based on live stock. The Federal Reserve Board further amplified this provision of the Act in defining six-months' agricultural paper; wherein they held that this provision "included the breeding, raising, fattening, or marketing of live stock." Later rulings of the Federal Reserve Board and Council have set forth more fully the breadth of this clause in the Act. For example, the term live stock was "held to include not only beef cattle, but also horses and mules."⁴ At the same time, an informal ruling was also passed to the effect that "mortgages on cattle are not required, and the question whether paper secured by cattle is self-liquidating, is a legal one to be determined at the Federal Reserve Bank."⁵ This ruling established a precedent in the live stock industry, which indicates a crucial turning point in the agriculture of the whole United States from its historically unstable character to a reliable business. The old practice of requiring a chattel mortgage on live stock was all right in its time, but that time has, for the most part, passed away. The farmer is a reliable citizen of the community. Cattle do not run wild in the woods any more. Most of the large ranches are fenced, and there is little difficulty in identifying the live stock. Also, the acquiescence of the banking system to accept live stock paper without a chattel mortgage saves both the lender and the borrower a great amount of red tape and embarrassment, and, no doubt, a great many profitable loans are now made for those productive purposes, which formerly were not negotiated because they were handicapped by the chattel mortgage.

A more elaborate extension of the banking provisions for live stock farmers was voiced when in another ruling it was held that "loans on cattle for breeding, grazing, or fattening, may be made under the classification of six-months' agricultural paper and this paper may be rediscounted by a member bank at its Federal Reserve Bank."⁶ The result of this ruling is shown by the amount of live stock paper rediscounted by the

⁴ Federal Reserve Bulletin, June, 1915, Informal Ruling, p. 72.

⁵ Ibid., p. 74.

⁶ Ibid., December, 1916, p. 679. Informal Ruling of the Board.

Federal Reserve Banks. At the time of this writing, November, 1919, there was rediscounted in the Federal Reserve Banks \$34,052,000⁷ of live stock paper. Each month the Federal Reserve Board's report shows that millions of dollars' worth of live stock paper has been rediscounted and is held by the Reserve Banks. When it is remembered that the larger portion of the paper based on cattle is held by the local banks and cattle loan companies, some idea can be obtained of the far-reaching importance of adequate financing of the live stock industry.

Then, in order to prohibit the use of the "live stock paper" clause of the Federal Reserve Act for speculative and unproductive purposes, the Board held that "notes made by mule and cattle dealers are mercantile, rather than agricultural paper."⁸ Also, in an opinion delivered by the Council, "the bill or note of a packing company, the proceeds of which are used for the purchase of live stock which is slaughtered upon purchase, is not 'based on live stock' within the meaning of Section 13, and is, therefore, not eligible for rediscount, if it has a maturity in excess of ninety days."⁹

The vast importance of the dairy business in the United States, aggregating millions of dollars' worth of products for home use and for commerce, made it highly essential that the clause in the Federal Reserve Act providing for loans based on live stock should be interpreted in a sufficiently broad sense to include dairy cows. With this in mind, the Federal Reserve Board held that "notes signed by a farmer, the proceeds of which are used for the purchase of cows to be used as dairy cattle, are eligible for rediscount at the discretion of the Federal Reserve Banks, notwithstanding the fact that the cattle are not primarily purchased for breeding, raising and fattening, and marketing of live stock."¹⁰

While six months is entirely too short a time for loans based on dairy cows, if the farmer expects to make any substantial portion of the payment out of the proceeds from the sale of dairy

⁷ Federal Reserve Bulletin, November, 1919, p. 293.

⁸ Ibid., August, 1915, p. 212. Informal Ruling.

⁹ Ibid., August, 1917, p. 616. Opinion of the Federal Reserve Council.

¹⁰ Ibid., March, 1916, p. 112. Informal Ruling of the Board.

products, loans for this length of time will, nevertheless, enable farmers who have a going business and can reasonably expect incomes within six months, to take advantage of opportunities in the buying of registered and otherwise very desirable dairy cows. Such opportunities are frequently afforded at auction sales and elsewhere.

Ample provisions are made in the law as quoted, and by the broad interpretations of the Board and Council, for all the general and miscellaneous needs of farmers for short-term credit falling within the six months' limit. Special regulations covering such common and universal needs as fertilizers and tractors have been set forth. As early as 1915, the Board ruled that "a farmer's six months' note for commercial fertilizers, discounted and endorsed by a member bank, is agricultural paper eligible for rediscount with the Federal Reserve Bank."¹¹ This ruling is of far-reaching importance. Sellers of fertilizers will accept farmers' notes more readily, and give the farmers better terms, when they know that the notes can be turned into cash any day at their banks. The bank is equally liberal in discounting farmers' notes for this purpose, because it knows that, when necessary, the notes may be rediscounted at the Federal Reserve Bank for Federal Reserve notes. The same valuable attributes are attached to the ruling in favor of tractors, which is, that "where tractors are used to supplement the work of horses or mules, or are used altogether, instead of these animals, it is held that notes given by farmers for the purchase price of tractors, and maturing within six months, should be admitted to discount as agricultural paper."¹² Upon the basis of this ruling, the Act may, no doubt, be similarly interpreted for the purchase of other necessary productive equipment, as a twine-binder, lime-spreader, mowing machine, truck, or the like.

To cover the more general needs for short-term credit, to hire labor and till the soil, the Federal Reserve Board has held that "farmers' notes, the proceeds of which are used for tilling farms or for draining land already in use as farm land, should

¹¹ Federal Reserve Bulletin, June, 1915, p. 75. Informal Ruling of the Board.

¹² Ibid., April, 1918, p. 309. Informal Ruling of the Board.

be classified as agricultural paper, and are eligible for rediscount."¹³ In the opinion of the Council, "a note given for the purchase price of a commodity can be classed as agricultural paper, eligible for rediscount, when having a maturity in excess of ninety days, if the maker is to use the commodity for agricultural purposes, regardless of whether the note is discounted by the maker or by the endorser." The scope of these general provisions for agricultural paper was more definitely and concisely set forth in a ruling by the Federal Reserve Board, as follows:

"Where a farmer makes his note payable to the seller of a commodity, and actually uses the commodity for agricultural purposes, such a note may be treated as agricultural paper, whether discounted with the member bank by the farmer, as the maker, or by the seller, as the endorser."¹⁴

"Where the farmer makes his note payable to the member bank and uses the proceeds for an agricultural purpose, such a note may likewise be discounted by a Federal Reserve Bank as agricultural paper. If, however, in either of the foregoing cases the farmer does not use or intend to use the commodity purchased for an agricultural purpose, although it is capable of being so used, the note in question should be treated as commercial paper, and not as agricultural paper."¹⁵

However, there is some difficulty at times in distinguishing between some agricultural paper and commercial paper. In order to cover these cases, as definitely as practicable, the Federal Reserve Board held that "the nature of the bill, the name of the acceptor, and the name of the drawer would probably indicate that a farmer was the purchaser, and a dealer, the seller of the goods. However, the purchasing member bank will have to satisfy itself in some satisfactory way that the bill is substantially of an agricultural character. A simple memorandum attached to the bill, stating that the bill was drawn in payment of agricultural implements, signed either by the acceptor, or by the drawer, would probably be considered sufficient

¹³ Federal Reserve Bulletin, August, 1918, p. 783. Informal Ruling of the Board.

¹⁴ Ibid., April, 1918, p. 312. Opinion of the Council.

¹⁵ Ibid., April, 1918, p. 310. Informal Ruling of the Board.

evidence by the member bank and the Federal Reserve Bank.”¹⁶ At an earlier date, the Council had delivered its opinion to the effect that, “the purchase or sale of an agricultural product, or of implements or other commodities used in agriculture, constitute a commercial transaction. Where the proceeds of a note made by a merchant are used to purchase millet seed to be later retailed or sold, such a note cannot be treated as one given for agricultural purposes and cannot be discounted by a Federal Reserve Bank, if it has a maturity at time of discount of more than ninety days.”¹⁷ Previous to this, moreover, the Federal Reserve Board had ruled that “a note made by a dealer in agricultural implements is not agricultural paper.”¹⁸

Another step taken by the Federal Reserve Board with reference to chattel mortgages cannot be properly valued from the standpoint of the use and circulation of agricultural paper. As in the case of cattle paper, already cited, the elimination of the chattel mortgage requirement for loans based on agricultural operations relieves both the lender and the borrowers of unnecessary red tape; encourages the use of loans for productive purposes, and enables the paper to flow more freely through the commercial banking channels. With these facts in mind, the Federal Reserve Board held that “the Act does not require the taking of chattel mortgages as security for loans based on agricultural operations. The statement of the member bank to this effect must ordinarily be accepted. The direct, primary purpose of the loan should be for the ordinary operations of agriculture. Words ‘based on’ are not considered synonymous with ‘secured by.’ Agricultural paper need not be directly secured by agricultural products, but should be genuinely based upon transactions entered upon for agricultural operations. General banking prudence and knowledge should be applied.”¹⁹

In 1916, a member of the Federal Reserve Board, in a published letter, stated that the short-term provisions for farm credits should aid the farmer in two primary ways. First, it

¹⁶ Federal Reserve Bulletin, February, 1916, p. 88. Informal Ruling of the Board.

¹⁷ Ibid., October, 1916, p. 526. Opinion of the Council.

¹⁸ Ibid., August, 1915, p. 212. Informal Ruling of the Board.

¹⁹ Ibid., June, 1915, p. 72. Informal Ruling of the Board.

should provide crop financing credit where six months' time is sufficient. Second, it should stabilize rates so that all staple crops would not be thrown at the same time on a market with falling prices, created by the large seasonal supply. Where this is done, the middleman reaps the profits due the farmer, because of his strategic position created by his past access to superior credit facilities. In other words, it should provide a means whereby farmers could secure banking accommodations on equal terms with others.²⁰

The policy of the Federal Reserve Board has been very liberal in determining the kinds of eligible paper. In all cases, it has apparently been their desire to carry out the purposes of the Act, which provide increased facilities for short-term agricultural credit. No better illustration of the attitude of the Federal Reserve Board can be shown than by some of their informal rulings on the problems presented them. They have repeatedly emphasized the fact that the Act does not require taking chattel mortgages as security. They believe that the spirit of the Act, which they have tried to encourage, is in direct opposition to this practice. They have found it necessary to rule out the paper of agricultural implement dealers as well as dealers in cattle and mules; nevertheless, the Federal Reserve Board has directly aided the farmer by ruling that farmers' implement paper generally is eligible for rediscount; their theory being that, since agricultural machinery and tools wear out rapidly, they cannot be strictly classified as permanent improvements. The purchase of tractors was specifically included among the purposes for which paper was eligible. In the same way, notes, where the proceeds were used for improving drainage on farms, and where commercial fertilizer was bought, were included as eligible paper.

These few examples are given only to show that the Federal Reserve Board appreciates the fact that it is imperative that this system aid in broadening the facilities for short-term agricultural credit. Certainly, there has been ample opportunity for a Board, disposed to be unfavorable to agricultural credit, to rule against a broad functioning of this Act on many of these

²⁰ Federal Reserve Bulletin, September, 1916, p. 444.

problems where the present Board has ruled in favor of the farmer. However, the problem of deciding upon legitimate agricultural paper is not a simple task. The Federal Reserve Banks are forbidden to use their funds to support speculation or for the withholding of goods from the market. In this, the farmer cannot be made an exception. The taking of a class position here would disgrace and disqualify the Federal Reserve System, because the Federal Reserve System is the nation's commercial banking system, and no other body of men can have as much influence upon the value of the dollar as the Federal Reserve Board. Special privileges to those classes who hold the nation's food products would immediately affect the living conditions of every other class, because the problem confronting the Federal Reserve Board is to serve the public as a whole. Such problems as the one of "financing the marketing of farm products" are, therefore, filled with difficulties. Is the holding of farm products in storage on the farm or in farmers' warehouses and elevators for a few months, speculation? Is credit granted for this purpose under the Federal Reserve Law legitimate? Can these questions be answered accurately? The Federal Reserve Board's answers are, that it has endeavored, and will endeavor, to grant such funds as are required for the *orderly* marketing of crops.

"The Board has consistently advocated, during the past five years, the policy of orderly marketing of crops. Assuming that adequate warehousing facilities are available, it seems to be in the interest of the consumer, as well as of the producer, that staple commodities remain as far as possible in the hands of producers, until sold for consumption. This policy gives the producer the benefit of an average price in that he is not required to 'dump' his products upon the market in excessive volume, thereby decreasing the price to the advantage of favored consumers or of speculators who do not, as a rule, pass the advantage on to the consumer. Owing to the great number of producers, there will always be competition between them to sell; which would not be the case if larger syndicates were able to acquire control of the bulk of the crop."²¹

In a letter addressed by Governor Harding to a counsel of the National Cannery Association, he said:

²¹ Federal Reserve Bulletin, December, 1919, p. 1109.

"It is evident that there are certain seasons of the year when loans of a particular kind must be made in large volume, and are entitled to more consideration than would be the case at other seasons, this being dependent upon the character of the industry. There is a wide difference between the granting of credit by banks for crop moving purposes at a time when crops are moving, or for canning or cold storage purposes at those seasons of the year when goods naturally pass into the hands of the canners, and the making of loans on agricultural products at periods when they should be marketed, and not hoarded, or in lending on canning or cold storage products when they ought to be sold to jobbers and retailers, instead of being held indefinitely for higher prices." ²²

These statements indicate the difficult questions confronting the Federal Reserve Board in the matter of financing the marketing of farm products. What are "essential credits" and "legitimate credit" under the Act? Should the farmer be refused credit to hold his products in storage until he considers it orderly and proper to market them, and the middleman be granted credit to finance the holding of such products in terminal storage? Should the farmer be compelled to market his products when some one else considers it proper, when the products he buys are not so marketed? Are the manufacturers of farm implements, clothes, and the like, compelled to market their goods when some one else considers it orderly? Do the wholesaler and the retailer sell their goods at the market price, when it is orderly to do so; or do they retain them until they get a fair price? Are all of these dealers in necessities financed alike?

These are some of the questions that confront the Federal Reserve Board, and they are questions that should confront this Board. The defining of "essentiality" is left to the member banks, and no satisfactory definition has been formulated. The quality of prompt repayment is the chief characteristic which has been stressed. This reduces essential credits to that of "liquidity," which is not a definition in any sense, and could, under a regime of falling prices such as we had in 1920, bar credit for the production and marketing of all of the necessities

²² This letter was published in the *Commercial & Financial Chronicle*, July 10, 1920, pp. 137-138.

of life—food, clothing, and shelter. The Director of the Division of Analysis and Research of the Federal Reserve Board commented upon one phase of this loose definition, as follows:

"If, for example, it should appear that a borrower had fallen into a way of business which required the extension of a longer and longer credit to customers, or that he was drawing upon securities of which he might stand possessed in order to protect, or collateral paper which he was keeping practically permanently in bank, or for which he was asking repeated renewals, the situation would be such as to raise a strong presumption against the essentiality of his borrowing."²³

But the Board has refused to define "essentiality" in any definite way. Governor Harding dismissed the matter as follows:

"It is not sufficiently close to the actual day-to-day requirements of business to lay down rules as to what loans are for essential purposes and what loans are not. The Federal Reserve Banks, in their dealings with member banks, are better situated in this respect; but ultimately the main responsibility of such decisions must rest with the commercial banks themselves, which, in their dealings with customers, are in a position to ascertain the purpose of each loan and to decide whether this purpose is essential or not."²⁴

Whether the Federal Reserve Board is doing its duty in its negligence to define such an important term is difficult to say. But, without such definition, the member bank can do nothing more than use its own judgment, and it is then at the mercy of the Federal Reserve Bank in the matter of rediscounting.

Notes of Cooperative Corporations are Eligible for Rediscount as Six-month Agricultural Paper

The Federal Reserve Board was recently requested to rule upon the eligibility of bankers' acceptances drawn by cooperative marketing associations against warehouse receipts covering nonperishable agricultural commodities. The facts as understood by the Board were as follows:

²³ H. PARKER WILLIS, "Discrimination in Inflation," *Commercial & Financial Chronicle*, Sept. 11, 1920, pp. 1040-41.

²⁴ Federal Reserve Bulletin, August, 1920, pp. 774-775.

"The associations are corporations organized without capital, and their members consist exclusively of producers of the particular crop which that association is organized to market. Each producer, as a condition of membership in the association, signs a standard form of agreement under the terms of which he agrees to sell and deliver his crop to the association. The agreement provides in substance that title to the commodity so delivered shall pass to the association at the time of delivery, that the transaction between the producer and the association is a sale, and the association shall have absolute control over the commodities delivered with the unqualified right to resell or hypothecate. The price at which the commodity is sold by the producer to the association is not fixed at the time of that sale, but the agreement provides that all the commodities delivered to the association shall be pooled according to the grades and resold, and the association agrees to pay to each producer the average price realized by the association upon the resale of the commodity in the pool to which the producer has contributed, less a proportionate part of the association's expenses. The commodities are to be stored in warehouses independent of the association and negotiable warehouse receipts issued therefor."²⁵

The Board was asked to rule whether the drafts drawn by such associations against these warehouse receipts will be eligible for acceptance by member banks and whether after acceptance the drafts will be eligible for rediscount by Federal Reserve Banks.

The Board referred to Section 13 of the Federal Reserve Act, and, also, stated its opinion "that a draft drawn by an association operating under the plan described is eligible for acceptance by member banks when secured at the time of acceptance by a warehouse receipt of the kind referred to in the above statement of facts, and that after acceptance such a draft will be eligible for rediscount by Federal Reserve Banks, provided it complies in all respects with the regulations of the Federal Reserve Board."

The law requires that a warehouse receipt in order to be the basis of an eligible banker's acceptance, shall be a document "conveying or securing title covering readily marketable

²⁵ Federal Reserve Bulletin, Aug., 1921, p. 963.

staples." The above statement of facts, therefore, complies with the requirements of the law.

At a later date the Board was asked to consider a similar case for tobacco growers' coöperative associations. The Board referred to its previous ruling upon drafts drawn upon and accepted by coöperative marketing associations, and stated "that in its opinion drafts, with maturities not in excess of six months, drawn by the growers, accepted by the tobacco growers' coöperative marketing association, and discounted by the growers with their indorsements, in accordance with the statement of facts herein contained, would be technically eligible for rediscount at Federal Reserve Banks as agricultural paper when offered by member banks, provided that the growers use the proceeds of the drafts for agricultural purposes, and provided, also, that the drafts comply in other respects with the requirements of the law and the Board's regulations."²⁶

If these drafts had been drawn upon and accepted by a tobacco dealer in an absolute sale the paper would have been classified as commercial rather than agricultural paper. But while the form of the contract between the grower and his coöperative association is a sale in substance, it is really only a consignment. The grower rather than the association takes all the risk incident to resale, since the association does not agree to pay any fixed price, but only such price as is equivalent to the average price realized by the association by the sale of all the tobacco in that particular pool. Consequently it was held that the acceptance of each draft by the association is merely a loan of the association's credit to the grower, and the first negotiation of the draft takes place when the grower discounts it at his local bank.

In a later ruling the Board held that the notes of packing and marketing associations are commercial and not agricultural paper. The basis of this latter ruling as of the former cases was determined by the use to be made of the credit. In the latter case the Board understood that the corporations or associations in question desired to use the proceeds of their notes for current purposes in connection with their packing and marketing busi-

²⁶ Federal Reserve Bulletin, Oct., 1921, p. 1199.

ness, such as the payment of wages and the purchase of supplies. Clearly this is for merchandising and not for agricultural purposes. If these organizations had contemplated other uses of the funds secured upon their notes, such as the making of advances to customers, the eligibility of the notes would have involved other considerations.

Reviewing the conditions governing farmers' short-term credit through member banks of the Federal Reserve System, it is obvious that under the terms of the law and the rulings of the Federal Reserve Board, member banks, either state or national, are authorized to handle the farmers' short-term paper along with their regular commercial banking practices. Member banks which are located in agricultural communities may find the farmers' short-term notes a considerable part of their banking business. These notes may be rediscounted with the Federal Reserve Bank; this makes the farmers' notes, bills of exchange, drafts and trade acceptances just as desirable paper as the merchants', in the channels of commercial banks. This is as it ought to be, because the farmers' short-term paper is as safe as the merchants', and, for the greater part, is not required to be rediscounted for any longer time.

However, both the banker and the farmer have much to learn in fostering the use of agricultural short-term paper. Bankers must realize that a prosperous agricultural community means prosperous business, much buying and selling, which are the prerequisites for prosperous banking. In order that the banker may accommodate the farmer with the short-term credit that he needs, the farmer must comply with certain business requirements; he must be prompt in paying his debts and keep his credit good. When a farmer wants to borrow from his bank, he must furnish the bank a credit rating or property statement of his business. This is especially necessary, since it is a regulation of the Federal Reserve Bank to rediscount notes for member banks, only when accompanied by a financial statement from the borrower. Financial statements for farmers and stockmen by the Federal Reserve Bank of Dallas are reprinted in the Appendix.²⁷

These liberal provisions for the Federal Reserve member

²⁷ See Appendix G.

banks to handle farmers' short-term paper, will solve the agricultural short-term credit needs in most parts of the country, if their use is properly stimulated.

The rulings of the Board provide for rediscounting the farmers' paper for feeder cattle, stockers, dairy cows and horses, farm implements and machinery, fertilizers, and, in fact, for any agricultural purpose. Millions and millions of dollars in farmers' short-term notes are now floating in the channels of the commercial banks. C. W. Thompson found by a survey²⁸ made through the United States Bureau of Markets that on July 1, 1918, approximately two and one-half billion dollars were outstanding in short-term bank loans to farmers; this represented fully one-tenth of the banks' loans and discounts at that time. In the Middle West, the amount of agricultural paper was found to be especially large. Such loans constituted more than fifty per cent of the total loans and discounts of the banks of North Dakota, South Dakota, and Kansas, fifty per cent in Nebraska, forty-seven per cent in Idaho, forty-one per cent in Oklahoma, forty per cent in Iowa, thirty-two per cent in Minnesota, thirty-nine per cent in Montana, thirty-six per cent in Wyoming, and thirty-two per cent in Colorado. The liberal admission of short-term agricultural paper to these banks is, undoubtedly, the greatest reform in agricultural finance that has ever taken place in the United States.

Elasticity Prime Requisite for Agricultural Credit

The fundamental principles of the Federal Reserve Act, with reference to short-term credit for agriculture, together with the rulings of the Federal Reserve Board and the opinions of the Council, have been presented. These facts, however, are of elementary importance, and only show a small portion of the benefits, which, in the large, agriculture will derive from the Federal Reserve System. The great advantage of the Federal Reserve System, for agriculture, as well as for commerce and industry, is in the provisions for elasticity under the Act. The main corner stones of this elasticity principle are in the clauses relative to the discounting and rediscounting of paper, deposits,

²⁸ *Banker-Farmer*, April, 1919.

reserve requirements, and the expansion and contraction of the volume of note issue.

Under the National Bank Act and System there was no organized rediscounting of paper, nor could notes be had upon the security of commercial or agricultural paper. Deposits and savings were immobile and inelastic. The reserve requirements were high and rigid; and the note issue power was rigidly controlled on the basis of Government bond security, which really regulated the volume of note issue by the market price of Government bonds, rather than according to the needs of the country.

The Federal Reserve Banks, under ordinary conditions, always stand ready to rediscount eligible paper for member banks. This enables a country bank to serve its community with credit for productive purposes, and when necessary, and for all ordinary purposes and conditions, unload the paper upon the Federal Reserve Bank for Federal Reserve notes.

The elasticity of the deposit currency has received less comment than the note issue, but is of considerably more importance from the standpoint of volume of business.²⁹ Under the National Bank Act, deposit currency was not sufficiently mobile, because of the high reserve requirements and the lack of a central reservoir. But under the Federal Reserve Act the mobility, as well as the elasticity of deposit currency, is vastly increased. The reserve requirements are limited to the required deposited reserves in the Federal Reserve Banks, who are required to keep against deposits a legal reserve of lawful money equivalent to 35 per cent. This requirement is not a rigid one; and, in case of emergency, the law provides that the Federal Reserve Board may suspend the reserve requirements for a period of thirty days, and renew from time to time, for a period not exceeding fifteen days, provided a graduated tax is established upon the amounts by which deposits are allowed to fall below the legal 35 per cent reserve.³⁰ This would, presumably, increase the rate of rediscount, but not limit the extent to which loans could be made upon approved security. The last and most

²⁹ In 1913, the amount of business transacted with deposit currency was approximately 440 billion dollars, and that with bank notes probably about 16 billion.—Irving Fisher.

³⁰ Federal Reserve Act, Sec. 11.

important factor for securing elasticity of deposit currency, as well as bank notes, is in the provision, enabling member banks to borrow funds of their Federal Reserve Bank and leave them on deposit as legal reserves.

The reserve requirements are the minimum, thus making all the elasticity possible for the volume of currency. In the reserve system, banks can let their reserves run low, because in case of need they can turn to their Federal Reserve Bank and rediscount paper, or borrow.

The bank note issue has received more attention than any other factor in the problem of elastic currency. As has been pointed out, the old national bank notes were a very inelastic sort of bond-secured currency. The Federal Reserve notes are different. They are obligations of the United States Government and "are first and paramount lien on all the assets" of the issuing Federal Reserve Banks, and have back of them, pledged with the Federal Reserve Agent, 100 per cent high-grade collateral. Acceptable collateral for reserve notes are: paper endorsed by member banks and drawn for commercial, industrial, or agricultural purposes, or for trading in the securities of the United States Government: bills of exchange endorsed by member banks' acceptances bought by a Federal Reserve Bank in the open market; and gold, including gold certificates. Except under extraordinary conditions, each Federal Reserve Bank must keep a gold reserve of 40 per cent against its outstanding notes.

The Federal Reserve note issue power possesses to a high degree the qualities of expansibility and contractibility. If a local bank needs an increased supply of currency to meet local demands, it may rediscount eligible paper with the Federal Reserve Bank, and obtain the proceeds in notes; which pass as readily, for all purposes, as money. The Reserve Bank, in turn, may replenish its supply of notes by discounting eligible paper with the Federal Reserve Agent. This process may go on as long as there is eligible paper for discount and rediscount, and the gold reserve does not fall below the legal minimum of 40 per cent. However, in case of emergencies, the Federal Reserve Board may permit a suspension of the reserve requirements, provided a graduated tax is imposed upon the deficiency—the

tax to be added to the rates of interest and discount. This seems to provide for the maximum possibility of expansion.

For an elastic currency, it is quite as important that the volume of notes contract when the demands decline, as it is to expand when the demands increase. For the purpose of contracting the note issue, it is provided, that national banks cannot count Federal Reserve notes in their vaults as legal reserves. No Federal Reserve Bank can pay out the notes issued by another bank except under penalty of a tax of ten per cent of the face value of the notes so paid out; on the contrary, each Federal Reserve Bank is required to send in for redemption the notes of other banks, and the Federal Reserve Board is authorized to charge a rate of interest as it may see fit on Federal Reserve notes uncovered by gold or gold certificates issued to Federal Reserve Banks.

The elasticity of the currency under the Federal Reserve Act is a vast improvement over the inelastic currency of the National Banking System. It enables the currency of the country to expand and contract with the increase or decrease in demands for productive purposes. The Federal Reserve Banks are an endeavor to decentralize the money and credit of the country from Wall Street. They provide central reservoirs for money and credit in the various districts of the country according to the needs, and enable currency to flow freely from one district to another, where the demands are most emergent. This should relieve the currency stringency in agricultural communities for the production, harvesting, and marketing of crops; and, therefore, materially benefit not only the agricultural classes, but the consuming public at large.

CHAPTER XI

HOW THE FEDERAL RESERVE SYSTEM HAS FUNCTIONED WITH RESPECT TO SHORT- TERM AGRICULTURAL CREDIT

The prerequisites for the functioning of the Federal Reserve Banks and member banks in respect to short-term agricultural credit were the interpretation of the legal provisions for such credit and the education of the bankers and farmers to use the machinery provided. The interpretation of the legal provisions has been set forth. How the bankers and farmers have used the machinery cannot be definitely and completely determined, due to the total lack of statistical data on the part of either the member banks, the Federal Reserve Banks, or the Federal Reserve Board. Governor Harding, of the Federal Reserve Board, frankly stated the situation in a letter to the writer, as follows:

"I acknowledge receipt of your letter of the 16th instant, and would state that the Board's Statistical Division has no record, nor data upon which to base an approximation of the amount of short-term credit extended to farmers by the banks of the country. I regret that I cannot offer any suggestion as to sources from which such information might be readily obtained."¹

The Federal Reserve Banks are able to keep accurate data only of the agricultural and live stock paper rediscounted, and the method of classification is such that much agricultural paper is classified under the name of "commodity paper" and the like; and also, due to the character of agricultural paper, member banks discount it as a last resort. They discount commercial paper and use the proceeds for further loans to farmers.

Paper to be rediscounted by a Federal Reserve Bank must be classified according to purpose, as: Agricultural, industrial, or commercial. In the case of paper where no purpose is stated,

¹ March 18, 1921.

or stated only in general terms, as "in accordance with Section 13," the occupation of the borrower is to be used as a guide in classification. Thus, a note for commercial fertilizer, unless given by a farmer and to be used by him, is commercial paper; or a note secured by 20 bales of cotton would be reported as "commercial and industrial paper—secured," unless the purpose is clearly stated to be agricultural; nor does it make any difference in classification if the payee of the note is a farmer.

In case a farmer gives his note secured by 25 steers, with or without documents attached, the note would be reported as commercial paper, unless there is information that the proceeds of the loan are for the production of live stock or other agricultural purposes. All six months' paper must be eligible for classification as agricultural or live stock paper.

The member banks have very rough methods of classification. Most of them have little information as to the purposes for which most farmers' loans are used. They know in a general way what the farmer is worth and his credit ability, and upon this information loans are either made or refused. This leaves no accurate information for the classification of the farmer's paper. The Federal Reserve Bank requires a credit statement from the farmer as a requisite for rediscount eligibility for paper maturing after 90 days. But this necessitates the local bank's requiring the statement only when the paper is for a period of more than 90 days, and not then unless the bank wishes to rediscount the paper.

The best that is humanly possible in studying the situation can only be indicative. The factors that indicate how the system and the short-term credit provisions for agriculture have functioned are the rediscounts, the improved transfer of funds between different sections of the country, and the equalization of interest and discount rates.

Rediscounts of Agricultural and Live Stock Paper

The practice of rediscounting paper is not original with the Federal Reserve System, nor with the national banking system; but we cannot go back further than the national banking system in this study. Under the national banking system, there was

a great deal of inter-bank borrowing and indirect loaning. This assumed many forms, which may be summarized as "notes and bills rediscounted," "bills payable," "overdrafts," "balances with correspondents," and the "issue of certificates of deposit in favor of lending banks." But the Federal Reserve Act aimed to legalize and standardize inter-bank borrowing through twelve Federal Reserve Banks holding the combined reserves of their respective member banks. Each reserve bank was authorized to rediscount definite classes of paper for its member banks, and any Federal Reserve Bank may be required by the Board to rediscount paper for any other Federal Reserve Bank when funds are needed more in one section of the country than in another. The service of the facilities for rediscounting agricultural paper may be in a vague way indicated by the rediscounts of *direct* agricultural and live stock paper maturing after 90 days. However, it must be borne in mind that only a small per cent of such paper is rediscounted and the proceeds used for loaning to farmers. Also, the farmers' paper maturing within 90 days is much greater than that maturing after 90 days, and of the amount of this class of paper, neither the Federal Reserve Banks nor the member banks have any accurate record. Data might be collected which would indicate the probable amount of such paper at any given time, but such data would contain no information for any other time, either before or after.

Seasonal and Annual Variations in Agricultural and Live Stock Paper Rediscounted as Affected by Economic Conditions

The rediscounting of paper is influenced by economic conditions like other banking practices. When prices are rising, paper secured by staple products can be quickly converted into cash and it is good banking paper. But when prices are falling and deposits are decreasing caution must be taken and conservativeness practiced. The story is reversed. In the same way the economic conditions of communities, individuals and businesses affect the character and supply of paper offered for rediscount. This is illustrated in a broad way by the period of rising prices from 1914 to 1920, and then the decline. Each

community and each Federal Reserve district as well as the country as a whole has annually its seasonal variations. These yearly variations during a period of increasing prices and prosperity were well illustrated by the rediscounts of agricultural and live stock paper maturing after 90 days.

When the Federal Reserve Banks opened their doors in November, 1914, little of this class of paper was offered for rediscount except at the Chicago and Dallas banks. In the districts of these two banks large sums of farmers' notes for the purchase of feeder live stock and feeds accumulate. Before the Federal Reserve System, the country banks would call in their reserves with correspondents and usually borrowed large sums in addition.

The first year of the Federal Reserve Banks' operations was a period of adjustments to new practices on the part of the member banks. Also, the financial situation was disturbed by the crisis brought about by the international situation at the very beginning of the banking reorganization. These complex social and economic conditions which were the result of the World War account for the economic depression in some parts of the country, notably in the cotton growing sections. Nevertheless the Federal Reserve System demonstrated its usefulness in managing the "cotton loan fund."

The Cotton Loan Fund

The cotton crop was unusually large in 1914 and the prices would have been depressed under ordinary conditions. However, about 65 per cent of the American grown cotton is exported. The closing of the cotton exchanges both in the United States and England was brought about by the chaotic conditions following the interruption of foreign trade and particularly the movement of cotton. Also, it was believed that with most of the great cotton-consuming countries engaged in war a normal demand could not be expected.

"Prices collapsed, quotations were unobtainable, and with the market utterly demoralized, sales were made sporadically at various points in the South at 5 cents a pound, and even lower prices were reported. As the cotton planter is so largely dependent upon credit in the raising of his crop, it was necessary to provide some means of assisting him

to secure such accommodations as he might require to meet the obligations he would ordinarily have provided for by the sale of his products in the open market.

"Various plans were brought to the attention both of the Federal Reserve Board and the Secretary of the Treasury by bankers and business men, among them the suggestion for the establishment of the cotton-loan fund somewhat similar in character and management to the gold exchange fund. After many conferences were held regarding the problem, the banks of New York agreed to pledge a subscription of \$50,000,000 to such a fund, provided that an equal amount be raised through the clearing houses in other than cotton-producing states. The plan provided that to the \$100,000,000 thus to be raised be added a further sum of \$35,000,000 to be contributed by banks in the cotton-producing states, provided that the \$100,000,000 should be called for in proportion as the \$35,000,000 should be subscribed and paid in. The Federal Reserve Board was asked to pass upon this plan and give its official sanction October 24. The Board became convinced that it would be impossible to raise the money necessary to relieve the cotton situation under any plan devised simply for the general good, unless the members of the Board should give their support and sanction to the undertaking, even though not acting in their official capacity. The Board felt impelled by their sense of public duty to act as the central committee of the cotton-loan fund, being satisfied that the necessities of the case demanded such action and that public opinion would approve this step.

"The opening of the Federal Reserve banks November 16 released a large amount of reserve funds, thereby enabling member banks to make new loans and grant extensions which otherwise would have been impossible." ²

The service of the cotton loan fund cannot be measured by the amount of money loaned. It helped to restore confidence and thus relieved the Federal Reserve Banks of a much more severe strain which would have been forced upon them. Also, it restored confidence to business activities, and relieved the demoralized situation among the cotton growers of the South.

Business Improvement and Rediscounts in 1915

Business conditions were completely altered in 1915. At

² Annual Report of the Federal Reserve Board, 1914, pp. 14, 15.

the close of the year the export trade had reached a high water mark. Manufacturing was active in almost all lines. The commodity exchanges of the country were open and the demand for practically all agricultural products was strong. Depression in business life had given way to extreme activity. The changes in some lines of business was startling. Wisely the Federal Reserve Board adopted the policy of preparedness and efficiency. The Board wished to be in readiness to meet any unexpected developments in the situation. Early in the summer of 1915 the Board appointed a committee to investigate the conditions and needs of the cotton-growing districts. "The committee entertained the view that warehouse receipts for cotton, grain, and other staple, non-perishable agricultural products of a readily marketable character, form an excellent basis for bank loans and particularly as under the terms of the Federal Reserve Act and the regulations of the Board, notes thus secured are eligible for rediscount by Federal Reserve Banks." The Board approved this plan and in order to encourage coöperation between member banks and producers, the Board issued on September 3, 1915, its "commodity paper regulation" which provided "that the notes secured by non-perishable staple commodities having a specific date of maturity and upon which member banks had not charged a rate of interest or discount, including all commissions, of more than 6 per cent per annum, should be eligible for rediscount by Federal Reserve Banks at a preferential rate." This regulation was general in nature and applied to all sections of the country and all staple products.

The Southern Reserve banks took advantage of the commodity regulation and converted many of their loans into the commodity form. The effect of the regulation was to improve confidence, which together with the improving market for cotton gave a stimulus to business conditions.

The Chicago, Atlanta, and Dallas banks made 54 per cent of the total volume of rediscounts of agricultural and live stock paper in 1915. This is almost self-explanatory, because these banks are located in the districts which grow the bulk of our farm products which are exported, and foreign trade was hampered by the European war.

Agricultural and Live Stock Paper Maturing after 90 Days Rediscounted in 1916

Farmers' paper maturing after 90 days, rediscounted in 1916, is found to be \$2,866,100 less than in 1915. This peculiar decline, when the system of rediscounting was really in its second year and all business was progressing with prices steadily rising, will perhaps be explained by the economic conditions of agriculture and the rural banks. In 1916 business improved, the opportunity for employment was much in excess of the supply of labor, wages were raised, new plants constructed, the production and consumption of goods increased, the prices of all merchandise advanced, and the volume of business as reflected by the reports was far in excess of any former total transaction during twelve months.³ But the *annual* crop yields depend upon conditions which are not affected by the law of demand, and this specific year unfavorable weather reduced the yield and caused disappointment in the harvest of all important crops, except hay and tobacco. The prices of farm products advanced, and the United States Department of Agriculture reported the production, farm values, and prices received at the farm, as follows:

TABLE VIII.—TOTAL PRODUCTION FARM VALUES ON DECEMBER 1, AND
AVERAGE PRICE PER BUSHEL RECEIVED BY FARMERS
AND PLANTERS—1915, 1916

1915			
	<i>Total Production in Bushels</i>	<i>Farm Values</i>	<i>Average Price per Bushel at the Farm—Cents</i>
Corn	2,994,773,000	\$1,722,680,000	87.5
Wheat	1,025,801,000	912,303,000	91.9
Oats	1,549,030,000	559,506,000	36.1
Barley	228,850,000	118,172,000	51.6
1916			
Corn	2,583,241,000	\$2,295,783,000	88.9
Wheat	639,886,000	1,025,765,000	160.3
Oats	1,251,992,000	656,179,000	52.8
Barley	180,927,000	159,534,000	88.2

The cotton area planted in 1916 was larger than usual, but

³ Annual Report of the Federal Reserve Board, 1916, p. 253.

unfavorable weather and the boll weevil greatly reduced the crop. The yield was estimated at 11,511,000 bales against 11,182,999 in 1915; and the estimated values were \$1,079,598,000 and \$604,210,000, respectively. The value of other farm products also advanced. Wool, Ohio fine delaine, rose to 86 cents in October against 72 cents in 1915; and cattle \$9.80 against \$8.85. As these figures indicate, the value of the farmers' crops was much greater than for the preceding year in spite of the reduction in quantity. Therefore, the cost of harvesting and moving the crops in 1916 was less, and the value of the crops greater than usual. This increased the farmer's purchasing power and his bank deposits. He borrowed less money than during the preceding year and the banker had more to loan with less need of rediscounting, consequently the Federal Reserve Banks were asked to rediscount less agricultural and live stock paper maturing after 90 days than the preceding year.

On the other hand, the commodity paper rediscounted was \$16,813,200 against \$10,315,000, and the commercial paper \$207,810,500 against \$167,353,000 in 1915.⁴ This increase was due in part to the addition of new member banks to the system, the more general acceptance of the facilities of the system, and the increase in the values of the commodities of commerce. Thus, the principal factor, the increase in values, which causes the decrease in farmers' paper offered for rediscount, increased the commercial and commodity paper.

Agricultural and Live Stock Paper Maturing after 90 Days Rediscounted in 1917

The Federal Reserve Banks rediscounted \$12,313,000 more farmers' paper maturing after 90 days in 1917 than the previous year. This was in spite of the fact that the prices of farm products continued to advance and the farmers' income to increase. The wholesale price⁵ of farm products was 239 against 166 in 1916. The causes for this increase in farmers' paper rediscounted are not difficult to find. They may be summarized as follows:

1. The appeal of President Wilson for the patriotic produc-

⁴ Annual Report of the Federal Reserve Board, 1916, pp. 91, 92, and 1915, pp. 68, 70.

⁵ United States Bureau of Labor Statistics, Index Number.

tion of food supplies was answered by the expansion of farming operations throughout the country.

2. High prices encouraged the farmers to feed more cattle and cultivate larger areas at increasing costs.

3. The farmers' pre-war equipment was wearing out and had to be replaced by new, at war prices. Also, tractors, trucks, and the like were bought at war prices to further war production. The prices of fertilizers and farm implements had advanced to unheard of prices. Thus, while the farmers' income was increasing, the outlays were also, and the margin of savings was not as large perhaps as it might have appeared.

4. The policy, dictated by President Wilson and acted upon by the Federal Reserve Board, of extending credit liberally for necessary production, which included the staple agricultural crops and live stock, encouraged many country banks to join the Federal Reserve System, and the farmers to use credit as they never had before.

5. The increasing deposits of the country banks were absorbed in the purchase of Government securities, Liberty bonds, war savings stamps and the like. Customers borrowed large sums for these purposes, and the farmers themselves invested freely.

6. In many sections of the country, the crop production was disappointing. This was particularly true in the districts of the Chicago, Minneapolis, and Kansas City banks. Hot, dry weather checked the growth of the crops in the early part of the summer, and compelled the farmers to market unfinished live stock. In the autumn, damp, foggy weather and early frosts seriously injured the late maturing crops and made a large per cent of the products unmarketable. This compelled the Western farmers to import feeder stock to use profitably the unmarketable portion of such crops as corn.

These are among the outstanding causes which influenced the increase in agricultural and live stock paper, rediscounted, in 1917.

Agricultural and Live Stock Paper Maturing after 90 Days, Rediscounted in 1918

In 1918, the Federal Reserve Banks rediscounted more agri-

cultural and live stock paper maturing after 90 days than ever before. The total aggregated \$156,246,200 against \$29,130,900 in 1917, and \$16,817,800 in 1916. The year opened with demands for rediscounts, because of the disappointing conditions in some agricultural districts the previous year.

In the fall of 1917, the United States Bureau of Markets made a survey in the Western states of the credit needs of the farmers, which could be supplied from local sources. The estimates are based upon reports from the banks and the following is a summary of the important states: ⁶

TABLE IX.—PER CENT OF THE BANK CREDIT NEEDS OF FARMERS WHICH COULD BE SUPPLIED FROM LOCAL SOURCES IN WESTERN STATES IN 1917

<i>States</i>	<i>To Plant Crops in Fall of 1917</i>	<i>To Plant Crops in Spring of 1918</i>
Montana	60.6	57.6
Idaho	89.8	89.7
North Dakota	74.3	71.7
South Dakota	92.6	92.9
Nebraska	90.6	93.0
Kansas	83.0	94.8
Oklahoma	88.4	81.1
Texas	86.5	82.8

While the rediscounts of farmers' paper maturing after 90 days at all the Federal Reserve banks increased in large amounts in 1918 over the previous year, the percentage of the total for all banks increased only at the Kansas City, San Francisco, Philadelphia, and Boston banks.

Agricultural and Live Stock Paper Maturing after 90 Days, Rediscounted in 1919

In 1919, the total rediscounts of agricultural and live stock paper maturing after 90 days decreased to \$125,285,400 against \$156,246,200 the previous year. The decline in paper rediscounted is the result of a heterogeneous mingling of circumstances and influences.

By the spring of 1919, the definite end of war hostilities was an established fact. The armies were gradually being with-

⁶ Federal Reserve Bulletin, December, 1917, p. 958.

drawn to their native countries, and confidence in continued high prices was beginning to wane; merchants began to buy "hand to mouth" orders; Government war contracts were canceled; interest and discount rates were raised and the money market began to tighten; and the farmers curtailed their crop acreage. The total acreage of corn in 1919 was 102,977,000 against 107,494,000 in 1918; oats, 42,365,000 against 44,400,000; and hay, 69,719,000 against 71,254,000. The winter wheat crop had been planted before the Armistice and the guaranteed price of the Government was the principal stimulus. The acreage for 1919 was 71,526,000 against 59,110,000 the previous year. The curtailment in borrowing for the planting season is indicated by the total rediscounts of farmers' paper maturing after 90 days in 1919 compared with 1918, which were as follows:

	<i>May</i>	<i>June</i>	<i>July</i>
1918	\$28,216,700	\$21,701,600	\$25,263,700
1919	16,460,200	16,909,100	9,345,000

This decline in borrowing for the planting season is due to the tightening up of the credit strings by the bankers, the curtailment of acreage planting by the farmers, and their strong financial position as a result of favorable agricultural conditions and high prices the previous year.

For harvesting and marketing the crops in the autumn the farmers' rediscounts were only a little less than the previous year. The heavy borrowing in the autumn was perhaps due to the relaxation in savings and the absorption of the accumulated savings through the purchase of victory notes and Liberty bonds.

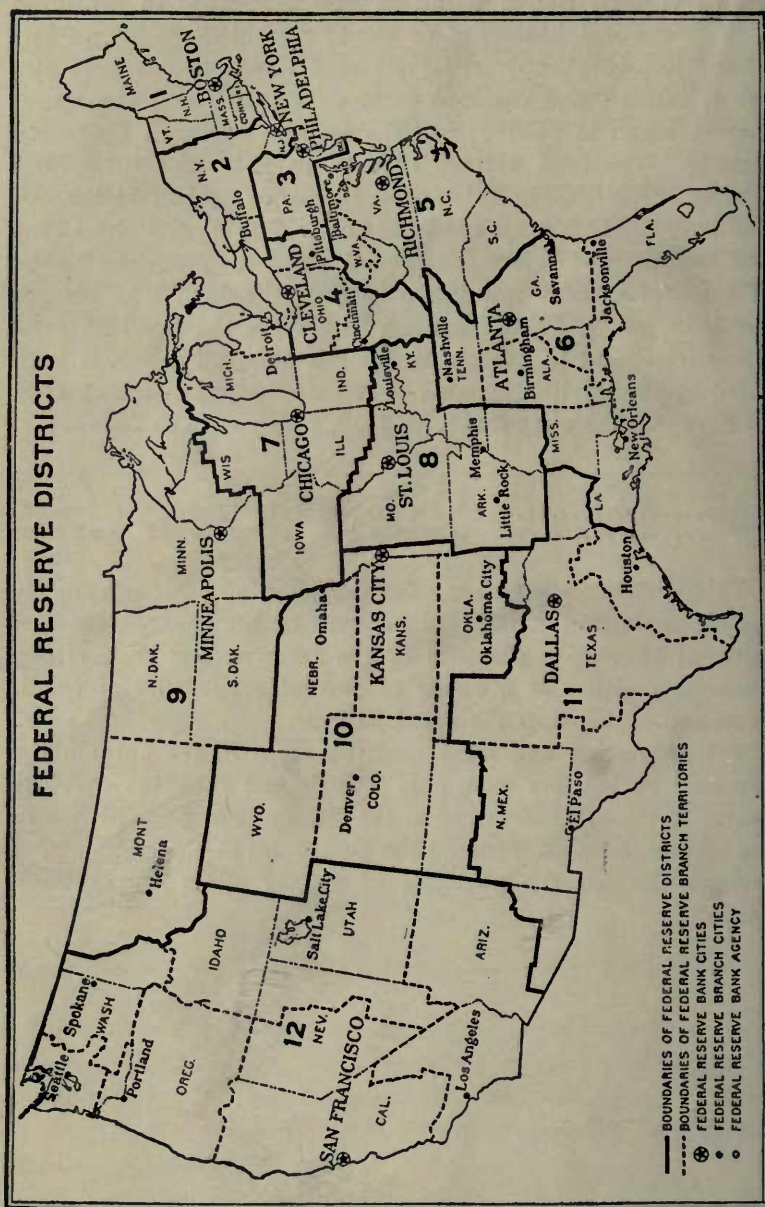


Fig. X.—Boundaries of Federal Reserve Districts, and location of branches, banks and agencies.

CHAPTER XII

SEASONAL AND ANNUAL VARIATION IN THE VOLUME OF AGRICULTURAL AND LIVE STOCK PAPER MATURING AFTER 90 DAYS, REDISCOUNTED BY THE SEPARATE FEDERAL RESERVE BANKS, AS AFFECTED BY ECONOMIC CONDITIONS

BOSTON, NEW YORK, PHILADELPHIA, CLEVELAND, RICHMOND AND
ATLANTA

The volume of paper offered for rediscount varies inversely with economic conditions. During periods of prosperity or rising prices, when buying and selling are done freely, and quick turnovers are made, banks are not burdened with *frozen credit*, and almost any legitimate commercial transaction can be financed without difficulty. But during periods of depression, when crop failures, business failures and other events cause men to doubt the solvency of each other, the institutions financing the producing and marketing activities hoist the flag of conservatism, and credit is not granted freely. If prices decline a few points the holders of products refuse to sell, trusting that the decline is only temporary, but the buyers wait for still further declines, and the economics of the times seem to be "out of joint," and despite the conservatism of the bankers, *frozen credits* pile up in the bank coffers.

Every community has its own peculiar economic cycle. Each Federal Reserve Bank affords annually and from month to month abundant evidence of how financial conditions are affected by economic conditions in the respective districts. It is the purpose of the following chapters to show the correlation between the economic conditions of agriculture and bank loans to farmers in each Reserve Bank district.

Boston, New York, Philadelphia and Cleveland

In 1915, the rediscounting of agricultural and live stock paper began to evidence its real service. The Boston, New

York, Philadelphia and Cleveland Federal Reserve Banks, combined, rediscounted only 2.1 per cent of the total agricultural and live stock paper for 1914 and 1915.¹ Of this the Cleveland bank rediscounted 1.7 per cent, leaving .4 per cent rediscounted by the other three banks.

A detailed explanation would be superfluous. The rural members of the Boston, New York and Philadelphia Federal Reserve Banks are in old agricultural communities and on the average not the most important agricultural communities. Dairying, live stock, fruit and tobacco farming are the most important agricultural industries. Among these there are communities which rank very high as, for example, the tobacco-growing county of Lancaster, Pennsylvania, the wealthiest agricultural county in America, according to the 1920 U. S. Census. But these few communities where agriculture is the predominating industry do not afford enough agricultural paper maturing after 90 days to make this item very large among the total rediscounts of such paper by the Federal Reserve Banks; and the savings are proportionately very large in these old agricultural communities. The farmers do not borrow as in the agricultural states of the Middle West, and the country banks do not rediscount this class of paper freely. Farmers in these states are not favored customers because they have loose business habits and their notes are not classed as "prime" banking paper. However, there are large sums of other paper rediscounted by the country banks, the proceeds of which are used to extend credit to farmers. The amount of this business cannot be definitely ascertained, but country banks admit that it is a common practice. Also, country banks rediscount farmers' paper only as a last resort. The reasons for this are obvious. The farmers' notes are for small sums and are not standardized, and the farmers do not meet their obligations promptly. If it were possible to ascertain how much in the way of commodity paper, bankers' acceptances and the like, the Federal Reserve Banks of Boston, New York and Philadelphia rediscount for the Federal Reserve Banks of the Middle West and South for the purposes of supplying these communities with funds to loan farm-

¹ The paper rediscounted November and December, 1914, and for the year 1915 are combined.

ers it would explain some very much misrepresented practices in the matter of supplying agriculture with necessary short-term credit. But there is nothing in the records of the Federal Reserve Banks to clear up this obscurity.

The Federal Reserve Banks of Boston, New York and Philadelphia discounted the largest sums in May. In fact, the rediscounts for May were more than half of the year's total.

The reason for May being the month of largest rediscounts for these three banks is, that at this time farmers in these sections of the country are borrowing heaviest to finance their summer's work. In these sections of the country the problem of marketing does not draw upon the loan funds of the community as much as the purchases of the technical factors of production and harvesting.

The small amount of rediscounted paper in the Cleveland bank in 1915 is perhaps accounted for by the fact that in this district agriculture and industry are rather evenly balanced. But the "other" paper is so much more marketable than that of the farmers that the latter is rediscounted only as a last resort. Large sums of "other" paper are rediscounted and the proceeds converted into farmers' loans. The Cleveland bank rediscounts the largest sums of farmers' paper in the spring and autumn months. The peak of rediscounts was \$74,100 in October. July is the month of large demands for harvesting. The rediscounts in January are very small because at this time the farmers are rather inactive in matters of finance. They have sold their crops and are not yet actively preparing for the spring work. In this section of the country the agricultural interests are "dormant" so far as their short-term credit relations are concerned during the month of January.

The volume of this class of paper rediscounted by these banks in 1917 was very small. The Boston bank rediscounted 4.1 per cent of the total of this class of paper while the New York and Philadelphia banks rediscounted about one-tenth of one per cent. Up to September the rediscounts of the Boston bank had been only about \$500.00. The last four months of the year \$1,195,400 were rediscounted, the largest amount for any one month being \$580,000, in October. The reasons for the unusual rediscounts of the Boston bank in the autumn of 1917 were

found in the patriotic endeavor of the farmers to produce as large a supply of agricultural products as possible and the destruction of the 1917 crops by early frosts and plant diseases. In the Boston district the Federal Reserve Board reported that "a frost early in September, the heaviest on record, did great damage to the crops of this district, killing for the most part all tender vegetation; corn, tobacco and cranberries especially suffered. The peach crop is reported only fair, and the apple crop unusually light, while the potato crop will be smaller than was earlier expected, and complaints of rot and blight are heard. A sizable crop will be probably harvested."² The farmers therefore did not reap the income from the 1917 crops they had counted on, and were compelled to borrow to meet their obligations and for further operations.

In the New York district, crop conditions were good with increased acreage and extremely high prices in 1917. General business conditions were also very progressive. Business and manufacturing interests proceeded with caution, and buying orders as far as possible were restricted to immediate needs.³ Consequently, the savings were such that little farmers' paper was offered for rediscount.

In 1917 in the Philadelphia district, the farmers were reported not to have increased their operations, due to the inability to secure labor, and the high prices of fertilizer and seed. However, the crops were good and prices high. The tobacco crop of Pennsylvania alone was reported to be 9,000,000 pounds more than the previous year, or a total of 58,000,000, with prices averaging as high as 25 to 30 cents a pound.⁴ Consequently, the Federal Reserve Bank was offered very little farmers' paper.

The Cleveland bank rediscounted little farmers' paper in 1917 for the same reasons as the previous year. The Federal Reserve Agent reports that "this district also ranks high in agricultural products; and, although the planting season was late and cold, the crops have been large and profitable."⁵ The savings were evidently such that the country bankers and farmers

² The Federal Reserve Bulletin, October, 1917, pp. 797-8.

³ Annual Report of Federal Reserve Board, 1917, pp. 300-2.

⁴ Ibid., 1917, p. 358.

⁵ Ibid., 1917, p. 360.

were able to carry the burden of loans without any large amount of rediscounting.

The peak of the rediscounts by the Boston bank in 1918 was reached in December at \$995,800. In March and April the rediscounts were larger than usual. The farmers were induced to make more preparation for the spring planting than had been the custom, due perhaps to the encouragement of higher prices for farm products, and the report that the winter crops had been "injured by a thick layer of ice which had been beneath the snow all winter." The December peak was, no doubt, due to the Fourth Liberty loan in October, which compelled the farmers and local banks alike to discount larger amounts of paper than usual because their savings had been consumed in the purchase of bonds and war savings stamps. Also, the Boston bank rediscounted for other Federal Reserve Banks \$13,189,000 during the year. Undoubtedly a portion of this which came from the Richmond, Minneapolis, Dallas, and St. Louis banks was agricultural paper.

The rediscounts by the New York bank were negligible in 1918, the largest amount being in January, which was perhaps dairymen's paper for the purchase of feeds.

The Philadelphia bank rediscounted more farmers' paper than usual in 1918. The total for the year was \$3,835,500. The month of largest rediscounts was July, \$2,624,800, due to the increased acreage of tobacco and other summer crops, which were expensive to cultivate. Also, on June 27, the Philadelphia bank rediscounted \$1,934,745 for the Richmond bank, a portion of which was probably farmers' paper. In October there was a heavy demand by farmers for funds to move the bumper crops. In Pennsylvania alone the acreage of the nine principal crops was increased 320,219 over the previous year. The tobacco crop was 14 per cent larger than in 1917. Truck crops in general throughout the district were reported good, while the apple crop was 50 per cent above the ten year average. Only the peach growers seemed to have had a bad year. All prices ranged high, from 25 to 50 per cent above the previous year.⁶

The Cleveland bank rediscounted \$1,078,100 farmers' paper in 1918. This was, in the aggregate, a remarkable increase over

⁶ Annual Report of the Federal Reserve Board, 1918, p. 417.

the previous year. In March and April the largest amounts of farmers' paper were rediscounted. These are the only months in the year which show the normal seasonal cycles. The heavy borrowing at this season was for the spring planting, the buying of seed, fertilizers, farm machinery, and the like.

The autumn cycle was entirely distorted by the heavy agricultural production, and the ready demand for the farmers' products at abnormally high prices. The Federal Reserve Agent reported that "this district, while noted for its manufactures, is probably exceeded by few others in the amount and value of its agricultural products. The crops have generally exceeded the average, the acreage has been large, farms are well stocked, and there has been an entire freedom from the epidemics to which the stock is oftentimes subject. In view of the high prices the farmer has been very prosperous."⁷

In 1919, the Federal Reserve Banks of Boston, New York, Philadelphia, and Cleveland, rediscounted a negligible amount of agricultural and live stock paper maturing after 90 days. This was due primarily to the well entrenched financial position of the farmers, caused by the prosperity of the previous year. The Federal Reserve Agent of Cleveland stated that "the farmers are enjoying unusual prosperity, the result of highly satisfactory crops, and a large money return. This is particularly true of the Kentucky tobacco section and expressions of appreciation are heard of the ease with which the funds required to move the crops were secured from the Federal Reserve banks."⁸

The decline of rediscounts of agricultural paper maturing after 90 days in 1919 was not due to any unwillingness to rediscount on the part of the Federal Reserve Banks in these districts, but rather to the farmers' strong financial position and the fact that the crops sold so readily that the needs were met with paper of a shorter term.

Richmond

The rediscounts of the Richmond bank were 9.6 per cent of the total in 1915. The rediscounts rose steadily from March

⁷ Annual Report of the Federal Reserve Board, 1918, p. 452.

⁸ Ibid., 1919, p. 361.

to June and then declined until October. The peak of the year was reached in June at \$404,600. The large rediscounts during the spring and early summer month were a result of the international situation which caused a decrease in the export of cotton and live stock products. This made it necessary for the farmers to renew their notes given in the autumn of 1914, for carrying crops and live stock, and also to borrow for the new planting. Cotton, tobacco, live stock, peanuts and fruit are the principal agricultural products of commercial importance in this district. The largest amounts of farmers' paper are rediscounted in the spring, due to the heavy demands for the production period. The marketing and storing of the crops in this district are done largely by commercial interests and the paper is rediscounted as commodity paper. Tobacco and cotton are stored in licensed warehouses, and here it generally passes out of the control of the farmer.

In 1916, the rediscounts in the Richmond bank declined to 6.7 per cent of the total for all reserve banks. This shrinkage in the value of farmers' paper was due to the increase in the value of farm products and general prosperity. The Federal Reserve Agent of the Richmond district reported that crops were produced in only fair volume, but that prices were exceedingly high, the average grades of cotton having sold as high as 20 cents per pound, and tobacco at 18 to 20 cents per pound. In some cases special grades brought higher prices, the average of all probably showing an increase of 100 per cent over any recent prices.

In 1917 the rediscounts of the Richmond bank showed the normal seasonal cycle with light holdings of farmers' paper. This was due to the prevailing high prices for farm products and continued prosperity in the rural districts.

In 1918 the seasonal cycle of the Richmond bank's rediscounts was very much displaced during the latter half of the year by the high prices and prompt marketing of agricultural products. The first half of the year the demand was larger than usual, and the rediscounts were the largest in the history of the bank. The reason for the excessive demand was the heavy buying of equipment by farmers. The Federal Reserve Bulletin stated in May that in the Richmond district "the sup-

ply of fertilizers is not equal to the demand; agricultural implements, including plows, are in demand; some manufacturers report they are sold six months ahead." From July on, the rediscounts declined except for a slight rise in October. The total for the year aggregated \$3,099,800, or two per cent of the rediscounts for the 12 banks. The decline in the rediscounts for the latter half of the summer was a direct result of the unprecedented agricultural prosperity. The Federal Reserve Agent reported that "the cotton crop has been the largest ever produced, with one or two exceptions. Prices have averaged in the neighborhood of 30 cents per pound, against a normal average of about 10 cents, but the cost of producing the present crop has been much greater than usual. Farmers who have sold their crops are in a better position than ever before, but much cotton is being held for higher prices."⁹

The tobacco crop was reported much larger than usual, and the prices the highest ever received for tobacco. Also, unusual farm developments in the way of new houses and barns were reported, and much traffic in farm lands. The deposits in the local banks were very large and rediscounting was unnecessary. The daily average deposits of the member banks for the year was \$43,022,279.44 against \$31,704,936.90 in 1917.¹⁰

The rediscounts of farmers' long-maturing paper by the Richmond bank in 1919 were \$1,689,000 against \$3,099,800 the previous year. The Federal Reserve Agent of Richmond stated that "in the agricultural portions of the district, unprecedented prosperity has resulted primarily from the high prices realized from cotton at 35 to 40 cents per pound, high grades and long staples selling for double these prices, and tobacco at 30 to 50 cents per pound, high grades selling up to a dollar and more per pound."¹¹ Another class of paper, not rediscounted, had been rapidly drying up the credit of the member banks in the rural districts, as indicated by another statement by the Agent; "Sales of farm lands have been active at an advance over normal prices, based on the inflated value of crop returns for the year. These operations have created a large volume of farm paper, and

⁹ Annual Report of the Federal Reserve Board, 1918, p. 483.

¹⁰ Ibid.

¹¹ Ibid., 1919, p. 376.

more of this than is desirable has probably found its way into the banks." ¹²

Atlanta

The Atlanta bank is located in a district where the credit needs are expanding and becoming more diversified. It is usually thought of as primarily a cotton growing district, but it is the largest producer of vegetables and peaches of any of the Federal Reserve districts. Also, its iron, steel, and naval stores industries are growing rapidly and it is, perhaps, second only to the Philadelphia district in iron and steel products.

The Atlanta bank rediscounted the largest sums of farmers' paper in the late autumn of 1915. The peak of the year was reached in November, at \$733,400. The commodity paper rediscounted during the last four months of the year aggregated \$7,032,300,¹³ most of which was undoubtedly secured by cotton under the preferential commodity rate—the paper maturing between 30 and 60 days, rediscounted in 1915, aggregated \$13,097,000, and that from 60 to 90 days, \$14,464,000.¹⁴ Of this, a large sum was undoubtedly commercial paper secured by cotton held in licensed warehouses, because the largest sums of such paper accumulated in the autumn months when the cotton was being harvested and the farmers were settling their spring contracts for production equipment. Most of the actual farmers' paper rediscounted was for the harvesting of cotton, sugar beets, and cane, and the purchase of feeder live stock. In June, when the rediscounts of farmers' paper reached the second highest peak of the year, the loans were for production equipment, as commercial fertilizers, implements, and the like. In fact, the funds for marketing the crops do not seem to appear under the classification of agricultural and live stock paper.

The Atlanta bank rediscounted 6.7 per cent of the total farmers' paper maturing after 90 days in 1916.

The Federal Reserve Agent of the Atlanta district reported that excessive rains and winds of July caused considerable damage to agriculture and especially to the cotton crop of middle

¹² Annual Report of the Federal Reserve Board, 1919, p. 376.

¹³ *Ibid.*, 1915, p. 70.

¹⁴ *Ibid.*, 1915, p. 67.

and southern Alabama. The fruit crops of the district were light, but up to standard in variety and quality, and sold at increased prices over the previous year. The sugar and rice crops of Tennessee were the most satisfactory for many years and the tobacco crop was the largest in many years. Diversified farming followed the hard times of 1915 and there was a marked increase in the production of cattle and hogs throughout the district and packing house plants were established in a number of places.

Financial conditions were excellent and bank deposits continued to grow.¹⁵

In spite of the decline in rediscounts the seasonal cycles are clearly marked showing a rising demand by farmers in the spring and reaching the highest point in May at \$248,300 against \$384,400 the previous year. But the autumn months show a continuous decline in rediscounts in contrast to the preceding year. The reasons for this change are indicated in the preceding discussion. The autumn of 1915 was a period of hard times, a weak demand, and low prices for agricultural products, while in 1916 the situation was reversed. The prices were the highest for many years and instead of having to borrow to continue business the farmers were able to pay off many of their debts, make cash payments for what they bought, and increase their bank deposits. The farmers borrowed less than formerly, local banks' deposits were increased; and thus the necessity for rediscounting paper diminished.

In 1917 the farmers' paper rediscounted by the Atlanta bank declined, due primarily to the general economic conditions and high prices received for agricultural products. The Federal Reserve Agent reported that "excellent seasons prevailed during the year, and the agricultural producer was rewarded with a bountiful harvest. The district produced the largest crops of food and food products in its history. The cotton crop was up to normal and high prices prevailed for all farm products giving the district a full measure of prosperity."¹⁶ All farm products were readily sold and the numerous army camps in the district furnished a ready market for perishable products.

¹⁵ Annual Report of the Federal Reserve Board, 1916, pp. 3155-16.

¹⁶ *Ibid.*, 1917, p. 414.

The farmers' income and bank deposits increased and the district did not offer the Federal Reserve Bank as much long paper to rediscount as formerly.

In 1918, the Atlanta bank showed the normal spring and early summer demands in the rediscounts, except larger than usual. The rediscounts were \$591,500 in June. The reason for these rediscounts was the farmers bought as never before, fertilizers, farm machinery and the like at war prices; also, much of the tobacco crop remained on the farms for want of suitable weather to move it.

From July on, the rediscounts declined due to the ready market for farm products and the high prices. The Federal Reserve Agent reported that "owing to the great yield and high prices for all crops the producer finds himself in a strong financial position. The cotton yields were larger than in 1917, and during the early picking season the prevalence of satisfactory prices enabled the disposal of such an amount of the crop as sufficed to liquidate pressing obligations, the producers, however, depending on their better financial conditions and improved food situation to enable them to carry their surplus crop to better prices. The end of the year finds prices lower than in the early season and the cotton holding movement largely in force. Cotton buyers are experiencing some difficulty in purchasing the staple at the prevailing prices which are deemed to be too close to the cost of production. The banks have shown a general willingness to assist the farmer in carrying his cotton, though the producer has not found it necessary to borrow in great volume."¹⁷ Obviously the farmers as well as the local bankers were well entrenched by the savings of the previous year. The decline in prices was precipitated by the peace negotiations and the armistice.

In 1919, the Atlanta bank rediscounted \$4,664,700 farmers' paper maturing after 90 days against \$2,600,200 the previous year. The year opened with very moderate rediscounts but steadily increased until July when the peak for the year was reached at \$1,014,300 as against \$598,700 in 1918. The seasonal cycles for both years show the same trend, indicating the heaviest borrowing on the part of the farmers in the late spring and

¹⁷ Annual Report of the Federal Reserve Board, 1918, p. 518.

early summer months, which was primarily for the purpose of producing the crops. In the autumn, when it is generally expected that farmers in this district borrow for harvesting and marketing the crops, the length of time is of shorter duration than the spring borrowing, because the farmers pay up their loans as soon as the crops are marketed, and a large part of the crops produced by tenants are mortgaged so that they are marketed as soon as harvested. Borrowing that is done on cotton held in warehouses is done under the name of commodity paper and does not show up in the volume of agricultural paper. The conditions in the district, however, were very prosperous and the large volume of borrowing in the spring and early summer was due to increased acreage of cotton and other agricultural activities. The Federal Reserve Agent reported that "the price of cotton, the principal staple product of the district, has increased during the year from around 27 or 28 cents to around 40 cents. A large proportion of the crop was held for 35 cents and much cotton was held by the producer until the price reached 40 cents. Diversification in farming has continued to an encouraging extent, and a large increase is shown in the production of live stock in all the states comprising the district. A large proportion of the farmers are raising blooded cattle, hogs and sheep, and the average character of the stock shows a steady improvement in quality."¹⁸

The agent's report indicates that the farmers were in a strong financial position and were improving their farming operations.

¹⁸ Annual Report of the Federal Reserve Board, 1919, p. 395.

CHAPTER XIII

VARIATION IN PAPER REDISCOUNTED BY FEDERAL RESERVE BANKS (Continued)

CHICAGO, ST. LOUIS AND MINNEAPOLIS

Chicago

In 1915 the Chicago bank's rediscounts of farmers' paper reached the maximum in October at \$490,400, almost all live stock and grain paper. In the autumn the farmers in this district are purchasing feeder live stock and feed for the winter months. It is particularly noticeable that the Chicago bank shows no record of commodity paper in spite of the fact that the Board's commodity regulation includes grain. This is due perhaps to the fact that the elevators for storing grain are more adequate than the warehouses for storing cotton and also the local banking facilities in the Chicago district are far superior to those of either the Dallas or Atlanta districts. The local bankers are able to hold a large portion of the grain and live stock paper.

The First National Bank of Champaign, Illinois, as late as May, 1921, had never found it necessary to rediscount any paper of any kind at the Federal Reserve Bank. This bank is located in a strictly farming community and it rediscounts for from 11 to 22 country banks, holding on the above date more than one and a half millions in farmers' paper. Champaign County is one of the wealthiest agricultural counties in America. Live stock and corn are the two specialties. The capitalization of the average farm, according to unpublished statistics by the Department of Farm Management of the University of Illinois is over \$71,000. Farmers who have tangible property in this section of the country are very well cared for by the local banks and the deposits in the local banks are such that they are able to carry large sums of paper without resorting to the privilege of rediscounting. This accounts for the small amount of

agricultural and live stock paper rediscounted by the Chicago bank in 1915. Also, it should not be overlooked that most of the grain elevator paper is rediscounted as 60 to 90 days commercial paper.

The spring rediscounts in the Chicago bank were highest in June, at \$227,900. This is the season when fertilizers and farm equipment are purchased in largest quantities, and stall feeders and summer grazing cattle are placed.

The Chicago bank shows a strong late summer decline in August to \$103,300, which is explained by the conditions of inactivity, as in the Dallas and Atlanta districts, for this season of the year.

The cycles of rises and declines in the rediscounts of paper maturing after 90 days is very definitely controlled by the type of agriculture, the seasons, and the marketing conditions. This is clearly shown in the variation of rediscounts by the separate banks, according to the planting, harvesting, and marketing seasons, and economic conditions in the various districts.

In 1916 the Chicago bank rediscounted 17.6 per cent of the total agricultural and live stock paper for all reserve banks. However the amount rediscounted was less than for the previous year. The largest rediscounts were in June and October. The farmers borrowed heavily to harvest the corn crop and to buy feeder live stock. Nevertheless, the paper rediscounted was less than usual because of the high prices, which increased the farmer's income and his bank deposits.

The Chicago bank began the year 1917 with declining rediscounts due to the high prices of the previous year. The normal seasonal cycle hardly evidenced itself in the spring months. The volume of rediscounts in the fall months was unheard of before, reaching \$3,544,200 in November and the aggregate for the year was \$7,551,400, or 25.9 per cent of the rediscounts of agricultural and live stock paper maturing after 90 days by all the Reserve Banks. This was the largest amount of this class of paper ever rediscounted by the Federal Reserve Bank of Chicago, more than two and a half times the amount rediscounted the previous year. There are definite economic reasons for this increase in rediscounts and the extreme distortion of the normal seasonal cycles for both 1916 and 1917 in reverse directions.

In 1916 we found that crops were ordinarily good, and the prices for all farm products were very high. Also the demand for grain and provisions was greater than the supply, and marketing was done early. But in 1917 the situation was different. For patriotic reasons, the farmers supplied themselves with high priced equipment, fertilizers, and the like, and increased the crop acreage. The production of corn alone in the state of Illinois was estimated by the United States Department of Agriculture at 418,000,000 bushels, against 300,000,000 the previous year. But only 60.3 per cent of the 1917 crop was estimated marketable against 83.9 per cent of the previous crop. The unmarketable conditions of a large portion of the corn crop prevented the farmers disposing of this portion of the crop. This created a heavy demand for feeder live stock, and the Federal Reserve Agent stated in December that "within the last month or two a very strong demand has arisen in the country districts for funds for purchasing cattle and hogs to thus utilize this otherwise useless product,"¹ consequently the shipments of feeding cattle from Chicago in 1917 were 357,808 head against 255,696 in 1916.² The price of live stock was very high and the outlays were very large. This demand came about the same time as the issue of the second Liberty loan,—in October, which brought a heavy burden upon the local banks, quickly using up their deposits and forcing them to rediscount more paper than usual. Also, in the northern states of the district, beans, potatoes, and vegetables constituted a large part of farm products, and these suffered from early frosts. The wheat crop was about two-thirds of an average yield. The hay crop was below normal and the oats crop was the largest on record. The prices were satisfactory and the returns equaled the ordinary 100 per cent crop.³

The rediscounts by the Chicago bank declined to 11.7 per cent of the aggregate for all the Reserve Banks in 1918. The rediscounts showed a steady increase from March to July. It was during these months that the farmers were buying heavily: machinery, fertilizers, seed, feeder live stock, and the like.

In June the Federal Reserve Bulletin stated that in the

¹ Annual Report of the Federal Reserve Board, 1917, p. 434.

² Year Book of Figures, Pub. Drivers' Journal, Chicago, 1920, p. 40.

³ Annual Report of the Federal Reserve Board, 1917, p. 434.

Chicago district "agricultural implement manufacturers are able to dispose of all the products they can turn out under the existing conditions of scarcity of labor, material and transportation. Orders are far in excess of their ability to supply."⁴ The shipments of feeder cattle from the Chicago stock yards in May, June and July were 20,833; 23,433; and 26,190, against 12,383; 11,328; and 11,301, the previous year, and stocker and feeder prices were \$10.75; \$10.90; and \$10.25, against \$6.75; \$8.90, and \$8.50 in 1917.⁵ Perhaps a larger amount of farmers' paper was rediscounted than would have been had the third Liberty loan not been floated in May. The savings of the farmers and local bankers were invested in Liberty bonds and this made it necessary to rediscount larger amounts of paper than usual. At the same time accumulations of rediscountable paper were larger than ever before, due to the bringing in of larger volume and the increase in values.

With the exception of the usual mid-summer decline in August when the farmers are doing little buying the remaining months showed very high rediscounts with the peak for the year in October at \$4,056,300. During these latter months of the year the moving of the crops and the placing of feeder live stock for the winter required a large amount of long maturing paper. In October when the largest demands were evidenced by rediscounts the crop moving was well under way, but perhaps the fourth Liberty loan which was floated in October was responsible for forcing an unusually large amount of rediscounting by the local banks, as this issue came at the time when the savings of the rural communities were at their lowest point because no appreciable amount of the summer crops had been disposed of, and the recovery from the spring demands and the third Liberty loan was hardly completed. The Federal Reserve Agent stated that "the middle of the year found practically all banks in the district short of surplus funds due to their absorption by the successive issues of Liberty bonds and anticipatory issues of certificates of indebtedness and the exceedingly large requirements of essential business. This condition made recourse to the Federal Reserve Bank of Chicago impera-

⁴ Federal Reserve Bulletin, June, 1918, p. 537.

⁵ Year Book of Figures, Drovers' Journal, 1920, p. 40.

tive." ⁶ Also, during the year the state bank membership increased 217. ⁷

The Chicago bank's rediscounts of farmers' paper maturing after 90 days in 1919 were \$17,046,600 against \$18,271,000 the previous year. The normal seasonal cycles seem somewhat distorted, perhaps due to a more rigid policy on the part of the bank, and closer scrutiny of paper offered for rediscount.

In March, 1919, the rediscounts were \$1,022,100 against \$502,500 the previous year. No doubt this increase is entirely due to the increase in rents and payments on mortgages which are generally settled in March. The rediscounts for the spring planting and the summer work do not compare with those of 1918 because operations on the part of the farmers were slackened; a strong financial position of the farmers was evidenced after the prosperity of 1918, and a more restrictive policy was practiced on the part of the bank. The May rediscounts were \$1,645,200 against \$2,163,200 the previous year, while in June and July the rediscounts declined to \$847,700 and \$553,000, respectively, against \$1,871,100 and \$2,363,000 the previous year. But in the autumn the rediscounts ran about the same as the previous year except for the month of October, when the rediscounts were \$3,266,600 against \$4,056,300 in 1918. That is, the demand for funds to harvest and market the crops and supply the farms with feeder live stock was, in the aggregate, about the same for both years.

St. Louis

It would seem that this bank because of its location should handle large sums of this class of paper. The agricultural pursuits which draw heavily upon short-term credit are in this district—live stock, cotton, tobacco and grain farming. But the class of farming is poorer in this district than in the adjoining districts to Southern Illinois and Indiana, and Tennessee. Credit facilities are not well developed and confidence is not strong. Also much of the paper in this district, as cotton and tobacco warehouse secured notes, is classed as commodity paper and most of it matures within 90 days. Then, too, industrial and mercan-

⁶ Annual Report of the Federal Reserve Board, 1918, pp. 542, 543.

⁷ Ibid., p. 546.

tile paper has very large turnovers in this district. The industrial paper accumulates from the mining and manufacturing enterprises which are rapidly expanding in this section of the country. As in the other districts these latter classes of paper are rediscounted and the proceeds used to extend credit to farmers. This conceals large sums of agricultural paper.

The peak of the rediscounts of farmers' paper maturing after 90 days in the St. Louis bank in 1915, was reached in May, at \$105,600. This is the month when the largest amount of paper providing for the planting season accumulates. The explanation for the peak of the year coming in the spring (May) instead of in the fall (November) is perhaps that large sums of the autumn borrowing by farmers for feeding and marketing or storing crops are handled by middlemen, whereas the burden of the spring financing is left to the farmer on his own initiative.

In 1916 the St. Louis Agent reported that: "The agricultural portions of the district are in especially good condition. It is true that the major crops—cotton, corn, wheat, and oats—showed a considerable reduction in comparison with last year, but this was made up in the prices the farmer received for them. In some portions of the district farmers paid bonuses to the banks to take up their loans before maturity and at the same time increased their deposits in the banks. The hay crop on the whole was the largest ever raised and this means that there is an abundance of food for live stock. The cotton crop in this district came through the year in better condition than in other sections. It moved very rapidly, and the banks in the cotton sections were able to handle the situation with a minimum of outside help. . . .

"The receipts of cattle at the St. Louis National Stock Yards increased over the last year 206,621 head, and the shipments 43,918 head; receipts of hogs increased 465,646 head, and the shipments 79,335 head; receipts of sheep, 22,697 head, and shipments 14,388 head; receipts of horses and mules decreased 3,794 head, and the shipments 11,628 head.

"Postal receipts and clearings throughout the district showed a general increase for the year. . . .

"The year ended with all the banks in this district having deposits of a high level. The rate of interest to customers in the

large cities declined from 5 per cent to 4 and $4\frac{1}{2}$ per cent."⁸

The St. Louis bank's rediscounts sank to 1.4 per cent of the total, or \$408,400 in 1917. The causes for this decline are to be found in the general economic conditions and especially those of agriculture. The Federal Reserve Agent reported the wheat, oats and corn crop in excess of that of 1916; the cotton crop 60 to 75 per cent of the previous year, and the tobacco crop good.⁹ General business conditions were good, buying, selling, and production active, throughout the year. The price index of all crops was 46.1 per cent higher than a year before. Bank deposits increased, agricultural products sold readily, and little paper maturing after 90 days was offered for rediscount. On the other hand, the St. Louis bank rediscounted \$427,277 in commodity paper, which was paper secured by agricultural products, as cotton, tobacco, and grain, held for commercial disposition, all of which was within the 90 days' limit.

In 1918, from March until August, the St. Louis bank's rediscounts fluctuated widely. In March the rediscounts rose to \$678,600 against \$16,900 in February. In April and May the rediscounts fell, but in June the rediscounts reached the high point for the year at \$2,059,800. The reasons for these fluctuations and the divergence of the rediscounts of the latter half of the year from the normal course, are found in the abnormal circumstances of the times. The rediscounts in March, April, and May reflect the demands for fertilizers, seed, machinery, and other working capital by the farmers; but the June peak is the result of the demand for harvesting the spring wheat, and oats crop, which followed the floating of the third Liberty loan in May, when the farmers and local banks alike had already invested their savings. The decline in rediscounts for the latter half of the year corresponds to the previous year and is accounted for by similar conditions, good crops and very high prices. The Federal Reserve Agent reported that "the crop of winter and spring wheat in this district was considerably larger than that of last year, and also larger than the average for the five years previous. The production of cotton also exceeds that of last year and the five year average. The corn crop was a good

⁸ Annual Report of the Federal Reserve Board, 1916, pp. 340-341.

⁹ *Ibid.*, pp. 457-8.

deal below the record crop of 1917, but only slightly less than the average for the previous five years. The corn in this district was greatly damaged during the summer by dry and excessive temperature, accompanied by hot winds."¹⁰ Obviously, the prosperity of the St. Louis district is indebted to the bumper wheat crop and the ready demand for it at the Government fixed price; the corn crop was also very profitably disposed of through high priced live stock. This augmented the savings of the agricultural classes and the deposits in the local banks until they were able to withstand the decline in the autumn cotton prices. The total rediscounts for the year aggregated \$3,585,200, or 2.3 per cent of the aggregate for the twelve banks, of which \$2,059,800 were rediscounted in June. In 1918 the St. Louis bank's rediscounts of farmers' paper maturing after 90 days declined to \$1,210,200 against \$3,585,200 the previous year. This situation is accounted for by the high prices and ready market for all farm products. The Federal Reserve Agent reported that "the prosperity in the district was due in large measure to the high prices received for its farm products. While the cotton crop was short, the fifth short crop in succession, yet the exceptionally high prices made up to producers in value whatever they might have lost in quantity. The winter wheat crop, which was expected to be unusually large, was disappointing, as the quality of the grain was inferior to last year's. The yield of tobacco was larger than usual, but the quality was variable; as with cotton, however, the prices were higher than ordinary. The corn crop was somewhat larger than last year's and also beyond the five-year average. The apple yield was very satisfactory."¹¹ As in the Richmond district, the rediscounts were so irregular and unusual in proportion to the agricultural character of the district, that the data is hardly sufficient to illustrate the normal seasonal cycles. However, the peak of rediscounts came in July at \$245,600; this was also the peak of the marketing season in the district.

Minneapolis

In 1915 the Minneapolis bank rediscounted 9.9 per cent of

¹⁰ Annual Report of the Federal Reserve Board, 1918, pp. 582-583.

¹¹ *Ibid.*, 1919, p. 432.

the total farmers' paper maturing after 90 days for the Reserve Banks. The largest rediscounts in this district come at the seasons when the crops are being made, harvested, and stored. The district is peculiarly a grain growing region; and spring wheat is the most important crop. The heaviest borrowing for making this crop seems to come in May and June. At this season the largest sums of farmers' paper maturing after 90 days are forced in to the Federal Reserve Bank. Another period of large rediscounts of farmers' paper comes in the autumn about November. This is the season when the borrowing is the heaviest for financing the harvesting, marketing, and storing of crops.

In 1916 the Minneapolis bank increased its rediscounts to 12.2 per cent of the total for all Reserve Banks. The seasonal cycles were normal and about the same as the previous year. The autumn rediscounts were materially reduced, due to high prices and a ready market for the farm products. The Federal Reserve Agent reported the agricultural conditions unfavorable, due to a severely cold winter and a hot, dry summer. The district had a shortage of 100,000,000 bushels in the wheat crop. However, prices for wheat and other crops were very high, which relieved the depression that would otherwise have followed. The Federal Reserve notes issued to finance the moving of the crops were \$8,500,000 against \$8,000,000 the previous year, when the crops were physically much larger.

The improved purchasing power of the farmer was very noticeable, and the city and country banks alike were in a strong financial position throughout the year, with small occasion to rediscount paper. Deposits were substantially increased. The number of member banks increased 26 and the total deposits of the member banks had increased almost one hundred million dollars.¹²

The Minneapolis bank began the year 1917 with the volume of farmers' paper decreasing, due to the prosperity of the previous year, together with the normal sag in agricultural activities at this season. However, the rediscounts were very heavy in June and July, more than a million dollars in value each month. In November and December the rediscounts were also very large.

¹² Annual Report of the Federal Reserve Board, 1916, pp. 367-369.

The total rediscounts for the year were \$5,551,800, or 19.9 per cent of the aggregate for all banks. This was a very large increase over the previous year. The Federal Reserve Bank is perhaps responsible for the large rediscounts in May, June, and July. "Upon the request of business men and bankers, the Chairman and Federal Reserve Agent called a conference at Fargo, North Dakota, on April 15, as the result of which a short and active campaign was conducted throughout all the agricultural sections, resulting in North Dakota alone in the planting of 1,000,000 acres of additional crop. There were considerable increases in other parts of the district."¹³ This increased acreage required heavy outlays for fertilizers, equipments, operating expenses, and the like. None of the loans for these purposes could ordinarily be paid until the crops were sold, which required loans for a term longer than 90 days.

The grain crops of the district were seriously damaged by hot, dry weather, and the corn was further damaged by freezing weather in October followed by foggy days in November, which resulted in much loss from cold.

Along with these unfavorable conditions the Government fixed the price of wheat, effective September 1, at \$2.17 a bushel at Minneapolis. Other small grains and corn were not affected by the price control, but the market price of wheat was considerably reduced. This disturbed the normal relations between wheat prices and that of other grains, wheat becoming relatively cheap by comparison.

"Although the crop production was less than normal the increased cost of planting, cultivating, and harvesting showed itself in an active demand upon member banks throughout the greater part of the year, necessitating a larger degree of support from the Federal Reserve Bank than at any other time before in its history. The effect of this domain is shown in the tabulation of the rediscount operations of the Federal Reserve Bank during the year, and in the large increase in Federal Reserve notes outstanding, issued to and utilized by its members in very large part to support agricultural operations and move the fall crops. As in the previous year, crop moving demands were promptly taken care of without recourse, as during the period prior

¹³ Annual Report of the Federal Reserve Board, 1917, p. 485.

to the establishment of the Federal Reserve system, to currency shipments from Eastern money centers." ¹⁴

In 1918, the Minneapolis bank rediscounted \$18,152,500 farmers' paper maturing after 90 days, against \$5,531,800 the previous year. The peak of the rediscounts was in July at \$4,020,900. During the last quarter of the year, the rediscounts increased, but not in comparison with the previous year. In fact, the seasonal cycles of the rediscounts in 1918 were distorted from the normal trend. The heavy volume of rediscounts in May, June, and July were the results of the endeavors of the farmers to plant a larger acreage of crops than ever before, and in the face of the unsatisfactory conditions, the previous year, the Federal Reserve Agent reported that

"in the western portion of the district, there were large areas where the 1917 crop was short. Fall and early winter conditions in that year practically ruined the available supply of seed corn, and the spring planting season of 1918 brought on a very severe shortage. The Federal Reserve Bank and other interests were obliged to make the closest investigation as to available seed supplies, but by means of energetic coöperation were able to locate and advertise all the seed within the district that could be spared for shipment. By effecting proper distribution, sufficient seed was obtained to plant a normal acreage, and the 1918 crop was very large and of good quality. In common with corn other seed was high in price. The demands of the spring planting season put an unusually heavy burden on all commercial banks, reflected in a sharp rise of the rediscounted paper of the Federal Reserve Bank in April, followed by a steady and rapid increase, which continued until after harvest in the fall. With the beginning of the movement of the new crop there was a rapid liquidation and the amount of rediscounted paper fell off to moderate figures in December." ¹⁵

The Agent's explanation of the movement of rediscounts is conclusive. The member banks were subjected to heavier demands than for any previous year, due to the unsatisfactory crop conditions in 1917 and the Liberty loans which absorbed the savings of the public and the bank deposits; however, in the

¹⁴ Annual Report of the Federal Reserve Board, 1917, p. 486.

¹⁵ Ibid., 1918, p. 625.

autumn of 1918, when the crops began to move, the farmer's income was such that he was able to meet his current expenses and liquidate his bank indebtedness. Consequently the rediscounts of agricultural paper were not large in the autumn.

The Minneapolis bank rediscounted a much larger volume of farmers' paper in 1919 than in the previous year. In 1919 the monthly rediscounts of paper maturing after 90 days aggregated \$8,428,000. The previous year, the peak of rediscounts was in July, with no material demand in the autumn for harvesting and marketing the crops. In 1919 the months of largest rediscounts were May, \$1,730,000; November, \$1,679,100, and December, \$1,515,000. Why this difference in the demands by farmers for loans in the two years? The causes for the demands the previous year have been explained. In 1919 the farmers did not need to borrow such large amounts for production purposes, because of the financial success the previous year. The Federal Reserve Agent, in reporting the conditions of agriculture for the year, stated that "the acreage of new crop was satisfactory, and conditions during the early growing season were favorable. In June, the adverse effects of the dry weather began to appear in the western half of North Dakota and in Montana, followed by serious damage to North Dakota crops by grasshoppers. Montana suffered from an almost total lack of rain during the growing season, and crops were a failure, followed by very poor range conditions, which in the fall necessitated large shipments of stock out of the state on account of a shortage of feed. Much the same conditions existed in western North Dakota, which also sent out a considerable amount of live stock. Early winter conditions throughout the entire western half of the district were unusually severe."

The unseasonable weather brought hardship to many parts of the district, and compelled the farmers to borrow large amounts in spite of the previous year's success. In the autumn, the early winter caused great damage to live stock and crops and tied up transportation facilities until prompt marketing was impossible. In evidence of this, the Federal Reserve Agent stated that "the serious car shortage . . . interfered with the movement of grain, farm produce, and commodities. During the last quarter of the year, the transportation was such as to

prevent the annual seasonal liquidation which at the close of the year was three months delayed. As a consequence, the commercial banks and the Federal Reserve Bank were subjected to a severe strain, due to the unusual financing requirements." This situation explains the heavy rediscounts at the end of the year of farmers' paper maturing after 90 days. It also further shows the ability of the Federal Reserve System to help out in emergencies, and its accommodating practices. The ear shortage was caused by the bad weather and the nation-wide coal strike, over which neither the farmers nor the Federal Reserve Bank had any control. However, the Federal Reserve Bank, by rediscounting the farmers' paper for its member banks, saved them from making large sacrifices and sustaining heavy losses.

CHAPTER XIV

VARIATION IN PAPER REDISCOUNTED BY FEDERAL RESERVE BANKS (Continued)

KANSAS CITY, DALLAS, AND SAN FRANCISCO

Kansas City

In the Kansas City bank district, the finishing of winter-fed live stock for market, the purchase of spring grazing stock, and the preparation for spring planting begin in February.

The Kansas City bank's rediscounts declined to \$46,400 in May, 1915, and then steadily increased, topping the year with \$383,900 in November. This reverse situation was due to the predominance of grain growing and live stock feeding. The grain paper for the previous year in this district had been gradually liquidated, but the new harvesting season for which borrowing began in June, created large sums of grain paper for rediscount because the price of No. 2 red winter wheat at Chicago sank from \$1.60 a bushel in April to \$1.19 in October, and large supplies were held in storage. The winter feeding of live stock is a very important business in the Kansas City district. In 1913 it was estimated that from 200 to 225 million dollars were loaned annually on feeder live stock at the Kansas City stock yards alone. In the fall of 1915 the price of live stock began to rise, and this encouraged feeding, which resulted in the creation of large sums of cattle feeders' paper for rediscount. The rediscounts began to decline in December, which indicated the liquidation of grain and cotton paper.

The Kansas City bank rediscounted more farmers' paper in 1916 than in the preceding year. The Federal Reserve Agent reported the most active and prosperous commercial condition in the history of that section of the country. While agricultural production was not as large as usual, prices were high, and farmers prospered as never before. Live stock sold at high prices and record receipts were broken. Bank deposits were un-

precedented. This accounts for the decline in the farmers' paper, rediscounted in the autumn of 1916 when compared with the previous year, and the deviation of the seasonal cycle from the normal trend.

The seasonal cycles in the Kansas City district were very much distorted from their normal course by abnormal conditions in 1917. Due to the high prices of the previous year, the year opened very prosperously. The savings and bank deposits of the agricultural classes were the largest in history. The Federal Reserve Bank entered the year with very low rediscounts in agricultural paper. However, they began to increase in April and continued until July when they reached the largest volume in the year up to November. The April, May, June, and July increases in rediscounts may be attributed to several causes, as the purchase of fertilizers, farm equipment, and the planting of the crops. Also, the first Liberty loan, floated in June of that year, no doubt had some influence, as the farmers, in order to be patriotic, used their savings to buy bonds and borrowed to make the crops. The banks invested their deposits heavily in Liberty bonds, which gave an added stimulus to passing the local paper on to the Federal Reserve Bank. The rediscounts then tumbled in August, but increased slowly in September, and reached \$327,200 in October. In November and December the rediscounts broke all former records and were for these months respectively, \$1,201,600 and \$1,847,800 against \$72,400 and \$34,400 the previous year.

These conditions are accounted for in the agricultural situation, and the financial conditions brought on by the war. The wheat crop in the Kansas City bank district was about two-thirds that of the previous year. "From September 6 to October 8, the local market received approximately 2,500,000 bushels, against 8,500,000 a year ago."¹ The corn crop was injured by early frosts, but the crop in bushels was 50 per cent over the previous year; however, prices were so high that local dealers bought slowly. For patriotic reasons, a larger crop of fall wheat was sown than ever before. Missouri reported an increase of 37 per cent in acreage. At the end of October, "the visible supply of wheat was one-twentieth of that for a year ago, and of corn,

¹ The Federal Reserve Bulletin, November, 1917, p. 893.

four-fifths.”² Through the summer, the movement of live stock to market was strong, due to dry weather and short pasture east of the Rocky Mountains, but the autumn brought a reverse movement of stock cattle for feeding purposes, due to the large amount of soft-corn to be utilized in feeding on the farms. This latter movement created a large amount of live stock paper for rediscount. The agricultural paper secured by live stock rediscounted by the Kansas City bank for the year aggregated \$10,280,112.89. The major part of this was rediscounted in the latter months of the year because this paper included both that maturing within and after 90 days, and the total rediscounts by this bank did not pass the ten million mark until May. But this class of paper was so large and the agricultural paper rediscounted with no security only aggregated \$1,832,658.42 that it is reasonable to believe that most of the paper maturing after 90 days was secured by live stock.

Along with the bad agricultural season, the heavy autumn purchases of feeder cattle to consume the soft corn in the district, the increase in the winter wheat acreage which drew heavily upon the farmers' savings and bank deposits, and the second Liberty loan in October, should not be overlooked. Both the farmers and local bankers subscribed heavily to this loan, and this tended to increase the farmers' borrowing for other purposes; thus, the local bank was inclined to shift more rediscountable paper than usual over to the Federal Reserve Bank in order to perform its patriotic duty.

In 1918 the Kansas City bank had a record year for rediscounting farmers' paper maturing after 90 days. The total monthly rediscounts of this class of paper aggregated \$61,241,500 against \$5,604,500 the previous year, or 39.2 per cent of the total rediscount for all Federal Reserve Banks against 19.3 in 1917.

The seasonal cycles in 1918 were the same as in 1917. The months of highest rediscounts during the first half of the producing season were: May, \$15,052,500; June, \$7,151,200, and July, \$8,448,600. The latter half of the year, the months of highest rediscounts were: October, \$4,666,100, and November, \$6,711,600.

² The Federal Reserve Bulletin, December, 1917, p. 696.

It was a year of unprecedented prosperity in the Kansas City district. The Federal Reserve Agent stated that "the district . . . sent to its six market cities approximately 26,288,000 meat animals, as against 22,847,000 in 1917; the increase being 1,055,000 cattle, 2,104,000 hogs, and 281,000 sheep, which enabled the meat packing plants to turn out by far the largest volume of products in any twelve-months' period. In spite of a long season of dry weather, which cut down the corn crop to 50 per cent of normal, and also affected other crops, the year brought to the six markets of the district the largest movements of grains and foods in any one year. . . .

"The vast volume of business which was recorded for 1918 naturally opened up new and larger problems for bankers and called for business and crop financing on a larger scale than anything before attempted."³

The drought of 1917 left the farmers without funds and necessitated borrowing for the larger part of their productive enterprises, at a time when they were practically obliged to buy Liberty bonds, War Savings Stamps, and the like, as well as produce a larger crop acreage than ever before. This necessitated their borrowing for a large part of their farm operations in 1918, which accounted for the large amount of agricultural and live stock paper rediscounted in this district.

Again, in 1919, the Kansas City bank led in the amount of agricultural and live stock paper maturing after 90 days, rediscounted, at \$52,243,100, or 41.7 per cent of the total rediscounts of all the Federal Reserve Banks. It is interesting to note that the Kansas City and San Francisco districts lead in the value of agricultural and live stock paper rediscounted by the Federal Reserve Banks in 1919. These two banks and the Dallas bank rediscounted 73.7 per cent of the total. One-fourth of the banks rediscounted almost three-fourths of the long-maturing farmers' paper. It is easy to understand why these three banks rediscount such a large amount of agricultural and live stock paper, because the principal industries of these districts are agricultural. But it is not quite so clear why the Minneapolis, St. Louis, Atlanta, and Chicago banks rediscounted such a small amount of farmers' long-maturing

³ Annual Report of the Federal Reserve Board, 1916, p. 654.

paper, because the magnitude of the agricultural activities in any one of these banks' districts would rival or even exceed that of either the Kansas City, San Francisco, or Dallas district. Perhaps it is due to the fact that the latter districts are newer, more sparsely settled, less adequately provided with local banking facilities and circulating capital.

The Kansas City bank faced a demand for rediscounting large amounts of farmers' paper at the beginning of the year 1919, due to the destruction by drought during the previous year. In January, the rediscounts were \$4,602,000 against \$1,909,000 in 1918. These heavy demands were for reconstructing the drought-stricken agricultural areas. New breeding stock and feeders had to be imported from other parts of the country.

The seasonal cycles were less irregular than those of the previous year. The peak of the year was in June, with rediscounts at \$8,942,800, with the second largest volume of rediscounts in December, at \$6,204,600. In 1918, the spring and fall peaks came in May and November. This difference is a problem of the weather conditions, over which neither the farmers nor the bankers have any control. The volume of paper rediscounted the first half of the year was less than in 1918, perhaps due to a slight curtailment in farm operations, as a relaxation from the war production; and also to the more critical attitude taken by bankers in regard to loans. But in the autumn the volume of rediscounts exceeded those of the previous year. The reason for this is not remote. Funds required to move the crops and purchase feeder live stock were increased because the 1919 crops were excellent, and the rain and pasturage plentiful.

In reporting conditions in the tenth district, in November, the Federal Reserve Agent stated: "That 1919 has been a good, all-round year agriculturally was disclosed in a practical way at the International Soils Product Show, in Kansas City, where the products of this district came in competition with those of the irrigated sections of Arizona and the fertile lands of Manitoba, and other favored sections of this country. Kansas, Oklahoma, and Colorado each had wonderfully fine prize-winning exhibits, while several of the counties and sections of other states of this district also had remarkable exhibits." ⁴

⁴ Bulletin of the Federal Reserve Board, November, 1919, p. 1034.

Dallas

The Dallas bank is located in a district where cotton, live stock, fruit, and vegetable production are the predominating industrial pursuits. The supplying of funds for producing the annual cotton crop reaches its highest point in May. During the months of February, March, and April, the financing of the vegetable growers and the payments on the spring leases are provided for; then follows the supplying of equipment and fertilizers and the planting of the cotton crop in May. Also during the months from April to July, the placing of summer grazing cattle on the Texas ranches requires millions of dollars in six-month live stock paper. A large portion of this is provided by the cattle loan companies, commission firms, and private cattle dealers; but the farmers who deal directly are financed by the local banks, and it is only this class of paper maturing after 90 days, and rediscounted, of which we have any record. The autumn demand, which swells the rediscounts in November and December, is primarily for the purpose of harvesting and storing the cotton crop and the placing of feeder live stock for the winter.

The cotton paper rediscounted in the autumn of 1915 was unusually large because of the international situation which seriously disturbed the foreign markets. However, almost all of the cotton crop passes out of the farmers' control shortly after it is harvested. It is stored and held in licensed warehouses, the paper for which is generally within the 90 days' limit, and is rediscounted as commercial paper. The Dallas bank in 1915 rediscounted a total of \$8,652,700, 30 to 60 day paper, and \$9,519,500, 60 to 90 day paper,⁵ the larger portion of which was rediscounted in the autumn months and undoubtedly was secured by stored cotton. The late summer decline in the Dallas bank's rediscounts reached its lowest ebb in October.

The Federal Reserve Agent of the Dallas bank in 1916 reported trade conditions "more than could reasonably be hoped for"; crops were good, the live stock industry prospered, and prices were high. Oklahoma alone produced \$400,000,000 worth of cotton. These conditions were reflected in the deposits in all the banks in the district. On October 16, the increase in

⁵ Annual Report of the Federal Reserve Board, 1915, p. 87.

deposits of member banks in the Reserve Banks of Dallas, Fort Worth, Waco, San Antonio, Houston, and Galveston, over like figures for the corresponding date in 1915, amounted to more than \$80,000,000, and in Dallas alone the increase was more than \$25,000,000. In Houston, the increase was said to have been even larger. The gain in all the banks in the state was estimated at 70 per cent.⁶ This prosperous condition of agriculture, the increase in the farmers' income and the banks' deposits, explain the decline in farmers' paper offered for rediscount at the Federal Reserve Bank.

In 1917, the rediscounts of the Dallas bank showed a decline over the previous year. The reasons for the general falling off in rediscounts are found in the general economic conditions and particularly in agriculture. The Federal Reserve Agent reported a year of very thriving business, in spite of the serious injury to crops by drought in some sections. In Texas the drought was considered the worst in the history of the state; the cotton growing districts particularly suffered; some of the best cotton growing sections produced no crop. The production of wheat and oats was below the average, but the prices ranged from 25 to 100 per cent higher than the previous year, and the increase in value more than offset the decrease in yield. The live stock industry prospered, except in particular sections for lack of rain. Prices for all classes of live stock reached record figures, and the stockmen prospered. All other industries in the district were active and reaped the benefits of high prices.

The banks entered the year carrying the heaviest deposits in their history, and the seasonal demands were met without disturbance. Rates for money were low and fluctuated little during the year. Clearings at the principal cities in the first eleven months increased 34 per cent over the same period the previous year, and post office receipts showed a very heavy increase over 1916.⁷

In 1918, the Dallas bank rediscounted \$23,066,400 against \$5,126,500 the previous year. The per cent of the total rediscounts of all the Federal Reserve banks was 14.5 per cent, against 17.6 per cent the previous year. While the rediscounts

⁶ Annual Report of the Federal Reserve Board, 1916, pp. 415-417.

⁷ Ibid., 1917, pp. 536-38.

of the Dallas bank increased to nearly four times that of the previous year, the proportion to the total for all banks was less. In 1918, the July peak showed rediscounts of \$3,600,700 against \$843,900 the previous year; and the December peak, \$3,334,100 against \$745,400. The reason for these increases in the farmers' demand is the amalgamation of the economic conditions for the two consecutive years. In 1917, the situation in the Dallas district was similar to the condition described in the Minneapolis district, or even worse, in respect to live stock and grain in the drought-stricken areas. In 1918, drought prevailed again throughout the western and southwestern portions of the district, and the crop conditions throughout the district were unsatisfactory. The yield of all crops was much below that of the previous year.

Like the crops, the cattle and sheep industry was seriously injured by drought. "Poor ranges and high prices of feed have forced many stockmen to sacrifice their herds; market receipts reflecting this condition have been very heavy, and consisted principally of stock cattle in an unfinished shape, sacrificed by stockmen on account of the high price of feed."⁸ But the poor agricultural conditions were offset by the oil booms and prosperous business conditions in the large cities.

Postal receipts for the first eleven months increased 41.3 per cent over the same period for the previous year, and bank clearings at the same cities, 16.7 per cent.⁹

High prices and prosperous industrial conditions, as a result of the war, seem to be all that saved this district from famine. The farmers were virtually carried by the banks.

The Dallas bank rediscounted \$25,607,900 farmers' paper maturing after 90 days in 1919, against \$23,066,400 the previous year. The order of rediscounts, however, was very different from that of 1918. The peak of the rediscounts in 1919 was in the month of January at \$4,602,000 against \$832,500 the previous year. The first seven months of the year, the rediscounts were more than two million each month, and in April and May more than three million, but declined sharply the last five months of the year, showing a very moderate demand for the

⁸ Annual Report of the Federal Reserve Board, 1918, p. 689.

⁹ Ibid.

crop moving; whereas, the previous year, the autumn demand was very large, showing the second highest peak of rediscounts in December at \$4,443,100, against \$955,400 in 1919. This change in the rediscounts is due to changes in the conditions of agriculture. It will be remembered that 1918 was a drought-stricken year for a large part of the Dallas district, and the year 1919 opened with the farmers in the buyers' market. This accounts for the large rediscounts in January.

With the exception of unfavorable rainy weather, 1919 was a prosperous season for the farmers of the Dallas district. The Federal Reserve Agent, in summarizing conditions, said: "Spring business opened up well, and agricultural prospects began to improve after a very excellent winter season. The wheat and oat crops were probably the heaviest in the history of the district, but much of the grain was lost through inability to harvest it. Heavy rains during the harvesting season prevented threshing, and several million bushels of grain were left in the field to rot. The rains continued throughout the fall months and seriously interfered with planting grain. In many counties very little farm work has been undertaken on account of excessive moisture." ¹⁰

The production of the crops, however, was very favorable, compared with the previous year. The percentage of increase over the 1918 crops was: Cotton, 14; wheat, 168; oats, 316, and corn, 220. ¹¹

The situation in the live stock industry was equally favorable. For two years the industry had been seriously handicapped by droughts. In 1919, rainfall was plentiful, and pasturage ample throughout the district; however, the number of cattle received at the Fort Worth market decreased 26, and hogs 24 per cent. ¹² This decrease was due to the destruction of breeding stock by the droughts of the previous year. In 1919, the herds were being built up again; the chief handicap was lack of necessary financial assistance. The heavy rediscounts the first half of the year were due to the endeavors to rebuild agriculturally the drought-stricken areas.

¹⁰ Annual Report of the Federal Reserve Board, 1919, p. 483.

¹¹ Ibid., p. 484.

¹² Ibid.

San Francisco

In 1914 and 1915 the San Francisco bank rediscounted 4 per cent of the total agricultural and live stock paper. The high point for the year was in February, at \$154,600. This is the largest rediscount balance for any month in the San Francisco bank until July, 1917, and the largest for February before 1918. It is an interesting bit of financial history that rediscounts of agricultural and live stock paper in the San Francisco bank rose from a total of \$11,800 in 1914 to \$35,700 in January, 1915, and \$154,600 in February. Then, with the exception of the mid-summer rise, which will be explained further on, they declined to \$9,500 in November. This February peak is puzzling to the superficial observer, but the explanation lies in the economic and social conditions which can be summed up as follows:

1. The opening of the World's Fair, February 20, 1912, and the sale of the live stock in that district.

2. The closing of foreign markets for agricultural products of the western coast, caused by the World War.

3. The creation of the cotton-loan fund providing for loans on specified warehoused and insured cotton, not below the grade of "low-middling," after February 2, 1915.

4. Since the banks opened November 16, 1914, the two and a half months before February, 1915, had been trying periods of adjustment to new practices on the part of both the Federal Reserve Banks and the member banks. Also, the financial situation was disturbed by the crises brought about by international conditions at the very beginning of the banking reorganization. These complex social and economic conditions, which were the result of the World's Fair and the international situation created by the war, account for the heavy rediscounts in February.

March showed a decline in the rediscounts of the San Francisco bank, then an upward movement continued until June and passed through July. During the months of increasing rediscounts from March until June, vast sums of credit were being employed for the making of crops. In June and July large sums are borrowed for harvesting the citrus fruits, packing, and canning. After July, the rediscounts declined and reached their lowest ebb in November. These are the months when the crops

are being marketed in large quantities, especially the citrus fruits, and loans for making and harvesting the crops are paid.

In December, the rediscounts increased. This is the month when large quantities of West Coast products are placed in storage and held for spring shipment. But the chief cause of this increase in 1915 was the closing of foreign markets for California products, due primarily to the World War. This compelled the storage of abnormally large quantities of cotton,¹³ coffee, rice, canned goods, oranges, lemons, raisins, prunes, and the like. Financing the carrying of these products created large sums of paper for rediscount; also, the live stock and cotton situation was in a very precarious condition in the whole district. The principal industries in this vast area are agriculture, horticulture, and live stock farming. The next in importance, perhaps, are mining and lumbering.

In 1916 the Federal Reserve Agent of the San Francisco bank reported general prosperity throughout the district. The barley crop was about 90 per cent average; but prices ruled 60 to 70 per cent above the average. The wheat crop was about normal, with higher prices. The cotton growers of the Imperial Valley realized about \$7,000,000. The cotton crop acreage was 98,000 against 40,000 in 1915. The sugar beet acreage was increased about 25 per cent and the price averaged \$6 per ton, 60 cents more than the previous year. The price of hops was low, due to an embargo placed on exports. The prune crop of California was about 20 per cent less than in 1915, but the crop of the northwest was about 33½ per cent greater, and it was estimated that \$1,000,000 more had been realized than on the 1915 crop. The shipment of citrus fruits increased 6,700 cars over the preceding year, and the value to growers was \$41,000,000 against \$20,000,000 in 1915. 18,000 carloads of grapes, cherries, apricots, peaches, plums, and pears were shipped, yielding about \$18,000,000. Fruit canners had one of their most prosperous seasons. The district produced 6,265,000 barrels of apples, against 5,834,000 in 1915. Live stock growers had very large returns, due to high prices; wool ranged from 26 to 32 cents per pound, and lambs were \$8.00 a head in Chicago. The salmon catch was about the average, 7,121,000 cases, but the value was

¹³ The financing of the cotton is discussed under the Dallas and Atlanta banks.

much greater than usual. Other industries, as petroleum production, mining, iron works, ship building, lumbering, exporting, manufacturing, and the like, were reported equally progressive.

Bank clearings showed a remarkable increase. From June 30, 1914, to November 19, 1916, deposits increased 48.6 per cent, while loans and investments increased only 21.9 per cent. Thus, in $2\frac{1}{2}$ years, the deposits of the national banks increased from \$576,000,000 to \$857,000,000.¹⁴

The rediscounts of the San Francisco bank were remarkably increased in 1917. The seasonal cycles were normal, showing the largest rediscounts in July and December. San Francisco rediscounted \$1,253,000 against \$404,200 the previous year. The district had a bad year in 1917; labor troubles and I. W. W. disturbances handicapped the industrial and economic progress of the district; and the Federal Reserve Agent reported unfavorable weather conditions for agriculture. In the Northwest, the spring was cold and backward, with hot winds and deficient moisture later in the summer. The Washington wheat crop was about 27,000,000 bushels, against 45,000,000 the previous year, and the yield of barley in Oregon, Washington, Idaho, and Nevada was about 18 per cent less, while in California there was considerable increase. The bean crop in California nearly doubled that of 1916, and the rice acreage was increased from 14,000 to 90,000 acres. The yield of raisins, peaches, deciduous and citrus fruits surpassed all previous years. The apple crop of Idaho, Oregon, and Washington was very large, and the live stock holdings in the Pacific Northwest showed a slight increase of 206,000 head, or 2.1 per cent.¹⁵ The deposits in all the national banks in the district November 20, 1917, stood at \$1,017,287,000 against \$847,879,000 and loans and discounts \$641,513,000 against \$538,089,000;¹⁶ thus, in 1917, in spite of unfavorable conditions in some sections, the district, as a whole, had a prosperous year, due to the high prices caused by the demand created by the war.

In 1918, the San Francisco bank rediscounted \$17,126,700

¹⁴ Annual Report of the Federal Reserve Board, 1916, pp. 461-464.

¹⁵ Ibid., 1917, pp. 498-600.

¹⁶ Ibid., pp. 602-603.

farmers' paper maturing after 90 days against \$1,253,000 the previous year, or 11 per cent of the rediscounts of this class of paper by all Federal Reserve Banks against 4.6 per cent in 1917. However, the seasonal cycles for the two years were the same with the major peaks in July and December.

Agricultural conditions, from the standpoint of production, were prosperous, as evidenced by the Federal Reserve Agent's report: "Agriculture remains the principal industry in the district, production during the war having been increased to some extent by urgent needs and high prices. The Department of Agriculture estimates the value of the agricultural products of this district during 1918 at \$851,427,000 as compared with \$822,579,000 in 1917. That this increased value is partly the result of increased yield is evidenced by the following example: in this district, production of wheat totaled 79,584,000 bushels against 70,899,000 in 1917; sugar beets more than 2,600,000 against 2,400,000; California rice, 400,000,000 pounds against 280,000,000; California beans, 8,868,000 bushels against 8,091,000; Arizona and California cotton acreage, 286,000 against 163,000; and shipments of California deciduous fruits, 28,204 cars against 24,961." ¹⁷

With these prosperous agricultural conditions, the unprecedented increase in the rediscounted farmers' paper maturing after 90 days is accounted for by the increase in prices and costs; the expansion of farm operations throughout the district; the buying of expensive farm equipment; the Liberty loans, which absorbed the member banks' deposits, and compelled them to rediscount a larger amount of this class of paper than before; and the increase in state bank membership from 17, with a capital and surplus of \$5,820,000 and resources of \$65,697,000, December 31, 1917, to 86 with capital and surplus of \$16,061,000 and resources of \$160,690,000 December 31, 1918.

The monthly rediscounts of farmers' paper maturing after 90 days by the San Francisco bank in 1919 aggregated \$14,488,300, against \$17,126,700 the previous year. The seasonal cycles are the same except in 1919, when the rediscounts in January and February show an abnormal increase. For these months, the rediscounts were \$1,487,000 and \$1,096,000, respectively, against

¹⁷ Annual Report of the Federal Reserve Board, 1918, p. 730.

\$930,800 and \$625,200, the previous year. This increase was due to the largest acreage planting in the history of the district, and particularly in the South, where planting was being done at this season of the year; the wheat acreage alone was over a million acres more than the previous year. The financial success of agriculture in the twelfth district in 1919 is clearly stated by the Federal Reserve Agent, as follows:

"The largest crops in the history of the district have been harvested and sold at record prices.

"Arizona and California (including that part of the Imperial Valley situated in Mexico) have grown 176,000 bales of cotton during 1919, an increase of 53,000 bales over 1918, with average yields of 305 pounds and 333 pounds per acre, respectively. These yields, which are the highest per acre in the United States, exceed the average by 147 and 175 pounds, respectively.

"The 1919 California citrus and deciduous fruit crop was the largest on record. Shipments for the year ending October 31, 1919, totaled 77,559 carloads.

"The California raisin crop of 200,000 tons, valued at \$33,000,000 exceeded that of 1918 by 33,000 tons.

"Of the ten leading wool-producing states, five are located in the twelfth Federal Reserve district, which produced approximately 30 per cent of the 1919 wool clip."¹⁸

The prosperous conditions and the ready sale of agricultural products explain the decrease in farmers' paper rediscounted. The climate of the twelfth district is so varied that its seasonal cycles are many. The planting season in Southern California is simultaneous with mid-winter in Washington. These variations in climate account for less irregularity in the volume of monthly rediscounts by the San Francisco bank than in any other Federal Reserve Bank.

¹⁸ Annual Report of the Federal Reserve Board, 1919, p. 501.

CHAPTER XV

INQUIRY OF THE UNITED STATES SENATE INTO HOW THE FEDERAL RESERVE BANKS HAVE SERVED AGRICULTURE, AND ANNUAL AND SEASONAL VARI- ATIONS IN REDISCOUNTS

Owing to the prevailing impression that agricultural credits in particular have been greatly curtailed during the past year, the Senate Committee on Agriculture and Forestry requested the Federal Reserve Board, December 14, 1920, to furnish information "as to the amount of actual agricultural paper rediscounted during the years 1919 and 1920, based on agricultural production and sales of the respective years." The Federal Reserve Board called for reports from the Federal Reserve Banks, and estimates were submitted of which the following is a summary:

TABLE X.—ESTIMATED AMOUNTS OF PAPER REDISCOUNTED WITH FEDERAL
RESERVE BANKS BASED ON PRODUCTION AND SALES OF
FARM PRODUCTS ¹

<i>Federal Reserve Bank</i>	<i>1919</i>	<i>1920</i>	<i>Remarks</i>
Boston	\$2,642,000	\$4,979,000	These figures are confined to farm and dairy loans and do not include large amounts advanced on cotton, wool, and similar lines.
New York	(1)	(1)	
Philadelphia	2,971,000	3,580,000	Figures are confined to strictly agricultural paper, omitting the paper and wool dealers, cotton merchants, produce dealers, packers, agricultural implement, and fertilizer concerns.
Cleveland	612,000	(2) 1,753,000	Total agricultural and live stock paper discounted. These figures do not reflect total accommodation granted to agricultural interests, as many members borrow on U. S. securities to afford accommodation to agricultural borrowers.

¹ Advance copy of the Annual Report of the Federal Reserve Board, 1920, pp. 16, 17.

SENATE INQUIRY

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TABLE X.—(Continued.)

<i>Federal Reserve Bank</i>	<i>1919</i>	<i>1920</i>	<i>Remarks</i>
Richmond	\$102,000,000	\$325,000,000	Figures include estimated amount of commercial and industrial paper discounted, the proceeds of which were used for agricultural purposes.
Atlanta	91,300,000	(2) 230,000,000	Do.
Chicago	47,263,000	128,408,000	Figures represent amounts of farmers' notes discounted. Actual amounts loaned for production and sale of farm products are much in excess of amounts given, as sales of farm products are largely financed by commercial paper, also large amounts are loaned to banks on commercial paper or on notes secured by U. S. obligations, the proceeds of which are loaned for agricultural purposes, either directly or through correspondent banks.
St. Louis	(2) 220,000,000	(2) 665,000,000	In addition a large part of loans on commercial and Government-secured paper was unquestionably for benefit of farmers.
Minneapolis	75,000,000	225,000,000	Figures do not include member banks' collateral notes the proceeds of which were used for loans to agricultural interests.
Kansas City	123,481,000	229,432,000	
Dallas	28,997,000	44,911,000	
San Francisco	35,000,000	122,000,000	Figures include total amounts of paper rediscounted during the two years based upon production and sales of farm products excluding notes secured by Government obligations. The bank is unable to estimate the amounts of paper rediscounted which represents borrowings on account of production and sales during the preceding year.
Total for 11 banks	\$729,266,000	\$1,980,063,000	
(1) No Data. (2) Eleven months.			

This estimate includes all agricultural paper, without regard to maturity. This paper is, therefore, of a very different character from that discussed in the preceding chapters. These estimates show that agricultural credit had not been curtailed, but the volume of farmers' paper rediscounted in 1920 was nearly three times that of the previous year. However, these figures are far from being accurate and not to be taken seriously. They do not show the large sums used for agricultural purposes which were loaned to correspondents by member banks of New York, Boston, Chicago, St. Louis, Minneapolis, Kansas City, New Orleans, San Francisco, and other financial centers; the large sums loaned by non-member state banks for agricultural purposes; the holdings of agricultural paper of all the member banks; and the large sums advanced to member banks on commercial paper, the proceeds of which were used for loans to agricultural interests. Also, the purchase of bankers' acceptances are not included in the report, and they play an important part in the movement of crops to markets. Perhaps, bankers' acceptances are commercial and not agricultural paper; but obviously large amounts of paper secured by grain, live stock, cotton, tobacco, and canned goods were commercial and not agricultural, even in the sense of being advancements made to farmers.

The chief information this report gives is the total lack of any adequate scheme of classification for agricultural paper by either the Federal Reserve Board or the Federal Reserve Banks. Perhaps the Federal Reserve System deserves criticism for not knowing more about the character of the security of its rediscounts; but if an adequate classification for agricultural paper were installed, it would have to go back far enough to include the loans of member banks, before the information would be adequate to indicate the service of the system to agriculture. While this would impose a clerical burden upon the member banks, which might seem to be an imposition, it would make it necessary for them to scrutinize more closely their loans and thereby enable them, perhaps, to avoid the accumulation of large amounts of "frozen" credit.

In the report to the Senate Committee, the Federal Reserve Board further reported the amount of agricultural and live

stock paper *held*, monthly, by each Federal Reserve Bank in 1919 and 1920, the totals of which, for the twelve Federal Reserve banks, are the following:

TABLE XI.—TOTAL AMOUNT OF AGRICULTURAL AND LIVE STOCK PAPER COMBINED, HELD BY ALL FEDERAL RESERVE BANKS ON THE LAST FRIDAY OF EACH MONTH, 1919-1920²

Month	(In Thousands of Dollars)	
	Year 1919	Year 1920
January	59,001	56,905
February	63,917	67,195
March	67,373	74,665
April	66,881	106,382
May	58,991	140,691
June	68,256	168,038
July	63,604	202,520
August	57,901	216,278
September	60,205	224,424
October	55,475	240,649
November	52,550	245,599
December *	51,068	246,938

* Figures of Thursday, Dec. 30, 1920.

First, it should be carefully observed that these totals are the amounts *held*, and not the amounts rediscounted by months. They also include all agricultural and live stock paper, and the volume maturing under 90 days is always much larger than that maturing after 90 days. However, by comparing the 1919 and 1920 totals, it is clear that the Federal Reserve Banks freely rediscounted farmers' paper, while the farmers held their products from the market because of declining prices.

In April, 1920, when prices began to decline, the total of farmers' paper held by the Federal Reserve Banks increased to \$106,382,000, against \$66,881,000 in 1919. From month to month, the rest of the year, the volume of farmers' paper held increased, until in December, the total was \$246,938,000, against \$51,068,000 in 1919. In 1919 the peak load of farmers' paper held was in June at \$68,256,000. From June to the end of the year, the volume of farmers' paper held declined, due to the high prices and the farmers' direct marketing of their products. But in 1920, the farmers' paper held in June was \$168,038,000, a record volume, and from June to the end of the year, it

² Advance report of the Federal Reserve Board, 1920, p. 18.

steadily increased, aggregating in December almost five times the volume held December, 1919, due to the decline in prices which discouraged the farmers from selling their products. The local banks discounted their farmer customers' notes and legally the Federal Reserve Banks were obliged to rediscount that which met their requirements.

At the time of writing this manuscript, the rediscounts of agricultural and live stock paper by the Federal Reserve Banks, maturing after 90 days, were not available, and had they been available, it would not have been advantageous to consider them for each separate district, as for the preceding years, because there were no seasonal cycles in 1920. It was one continuous increase of rediscounts, in spite of the advance in rates, and therefore, shows only how the Federal Reserve Banks accommodated the farmers when in a market of falling prices. This particular point in the case, however, is valuable. It shows by experience the ability of the Federal Reserve Banks to meet the needs of the farmers in times of emergencies. The extent to which agriculture was accommodated in the emergency in 1920, with paper maturing after 90 days, is adequately shown by comparing the total rediscounts of this class of paper for each of the Federal Reserve Banks in 1919 and 1920.

TABLE XII.—THE TOTAL REDISCOUNTS BY EACH OF THE FEDERAL RESERVE BANKS, OF AGRICULTURAL AND LIVE STOCK PAPER MATURING AFTER 90 DAYS, 1919 AND 1920 ³

<i>Federal Reserve Bank</i>	<i>(In Thousands of Dollars)</i>	
	<i>Year 1919</i>	<i>Year 1920</i>
Boston	73.5	325
New York	77.1	399
Philadelphia	11.8	76
Cleveland	344.4	1,225
Richmond	1,689.0	6,114
Atlanta	4,064.7	19,796
Chicago	17,046.6	79,120
St. Louis	1,210.2	10,681
Minneapolis	8,428.0	35,069
Kansas City	52,243.1	103,023
Dallas	25,607.9	44,937
San Francisco	14,488.3	51,122
Total	125,285.4	351,887

³ Compiled from the Annual Reports of the Federal Reserve Board.

There is but one conclusion to be drawn from this table, and that is, the Federal Reserve Banks may have been more critical of paper offered for rediscount than ever before, but the evidence shows that they responded liberally to the demands made by the member banks for their farmer clientele. The total farmers' paper maturing after 90 days rediscounted in 1920 was \$351,887,000, against \$125,285,400 the previous year.

Seasonal Variations in the Rediscounts of Agricultural and Live Stock Paper Maturing after 90 Days.

By glancing at Chart V, the fact that the farmers demand the largest volume of credit in May, June, July, October, November, and December, is apparent. The farmers demand the smallest volume of credit in February and August, or September. These seasonal variations are modified by the climatic conditions, and the annual earliness or lateness of the season. Also, the seasonal variations are different in each Federal Reserve district; these facts we learned in the preceding detailed investigation, and Chart V is merely a summary of seasonal variations. However, in the preceding pages, the rediscounts of each Federal Reserve Bank have been considered separately. Here all the rediscounts are averaged together for each separate year. Except as a summary showing general seasonal trends, these annual averages for all banks have little significance. It does show, however, the months when the farmers' demands upon the banking system, as a whole, are largest. But during these years, the normal seasonal cycles were distorted by the abnormal conditions, as a result of the war and very high prices.

The reasons for the annual peaks in the spring, early summer, and autumn need little comment, after the previous discussion. The May, June, and July demands of the farmers are for the production of crops. This includes the purchase of seed, fertilizers, mechanical equipment, summer grazing live stock, and the like, together with the hiring of labor. Noticeably, the agricultural and live stock paper rediscounted annually is largest in the spring and early summer months, except for 1915 and 1917.

In 1915, the November and June peaks are the same at 12.3 per cent of the total for the year. In the autumn of 1915, the cotton and grain farmers were compelled to hold large quan-

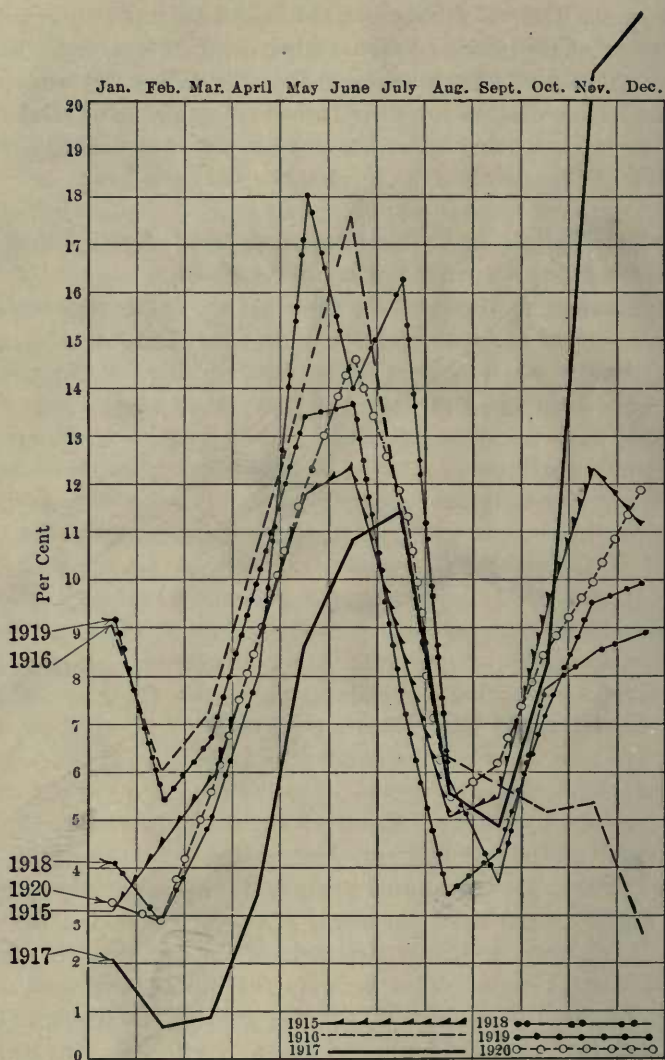


FIG. IX

CHART V.—Per cent of Annual Rediscounts by Months, 1915-1920, Agricultural and Livestock Paper Maturing After 90 Days.

tities of their crops because of the disturbance in the foreign trade situation, caused by the war. This accounts for the large volume of farmers' paper rediscounted during the interval, previously explained in detail for each separate district.

In 1916, the farmers were very prosperous and had less need for discounting notes than formerly, due to the unprecedented increase in the demand for and prices of all farm products, which was caused by the war. Consequently, the farmers borrowed very large amounts in May and June, for the production of crops; but in the autumn the farmers' borrowings steadily declined. The June peak showed rediscounts of agricultural and live stock paper aggregating 17.4 per cent of the year's total, and in December the rediscounts had declined to 2.6 per cent.

In 1917, the situation in regard to the seasonal peaks of agricultural loans was reversed in the extremes from that of 1916; that is, the June demands were less than in 1916; the July demands exceeded that of 1916, but were less than the 1916 June demands. This was due to high prices received for the preceding year's crops, which afforded the farmers a larger surplus than usual, and this enabled the farmers to meet their expenses for production in 1917 with less recourse to banking accommodations. But in the autumn the agricultural and live stock paper rediscounted increased to 20.4 per cent in November, and 21.6 per cent in December, of the year's total monthly rediscounts, the largest per cent rediscounted during these months for any year. The reasons for this large volume of farmers' paper rediscounted in the autumn of 1917 have been explained, but may be briefly summarized here; the patriotic response of the farmers to the President's appeal for increased production; the increased prices of farm equipment, the purchase of Liberty bonds by farmers, and country banks, which absorbed the savings of the agricultural classes, the more liberal policy of the local and Federal Reserve Banks toward the rediscounting of farmers' paper in order to encourage production, and the unsuccessful results obtained by the farmers in some sections of the country in 1917.

In 1918, the banks continued their liberal policy of rediscounting farmers' paper and encouraging necessary production for the prosecution of the war. The farmers took advantage of

the banking facilities offered them, and bought expensive equipment and planted record crops. In May, 18 per cent of the year's total monthly rediscounts of agricultural and live stock paper maturing after 90 days was rediscounted. While the crops were not the most successful in some sections of the country, and the decline in prices precipitated by peace negotiations caused the farmers in some sections to hold a portion of their crops, the prices were very high, and, on the whole, the farmers had a prosperous year. Consequently, the autumn borrowing was very much less than the preceding year. In November, the rediscounts aggregated the largest volume for any month since July, or 8.4 per cent of the aggregate monthly rediscounts for the year.

In 1919, the farmers rediscounted less paper than the previous year, due to the financial success of the preceding year, the reduction of crop acreage, and the tightening up of credit by the banks. The farmers' largest use of credit was during May and June for the production of crops. The peak of the year's rediscounts was in June, at 13.6 per cent of the total monthly rediscounts. In the autumn, the rediscounts of farmers' paper increased from August to December. In December, 9.9 per cent of the year's total was rediscounted. The autumn increase was due to the tendency on the part of farmers to hold their crops for higher prices.

In 1920, the farmers made their usual outlays for crop production. In June, 14.6 per cent of the year's total monthly rediscounts of agricultural and live stock paper, maturing after 90 days, was discounted with the Federal Reserve Banks. In the autumn, the farmers' paper rediscounted increased from August to December. In December, the per cent of the year's total was 11.88. The increase during the latter months of the year was due to the holding of crops for higher prices. The largest volume of credit extended the farmers for holding their crops had a maturity within 90 days; but little of it was liquidated when due. Therefore, this paper carried for the farmers by the local banks was renewed.

It is too often assumed that the farmers demand most bank credit in the autumn for moving the crops. This is an error which writers have made for the past fifty years. Statistics

show that the farmers demand more credit maturing after 90 days for the production of crops in the spring and early summer than for the harvesting and marketing in the fall and early winter. It should also be observed that a large portion of the farmers' long paper discounted in the autumn is for seeding the fall crops, as winter wheat, and the purchase of feeder live stock for winter. The larger portion of the farmers' paper for harvesting and marketing crops matures within 90 days, and in ordinary times its liquidity compares favorably with that of the merchants' paper.

CHAPTER XVI

SEASONAL VARIATIONS IN THE TRANSACTIONS THROUGH THE GOLD SETTLEMENT FUND

A discussion of the merits of the Gold Settlement Fund is not a part of this investigation, except as a necessary adjunct to the discussion of the seasonal variations in the transactions through the fund. Therefore, the function of the Gold Settlement Fund is to provide a national clearance system for the Federal Reserve Banks and their agents, conducted by the Federal Reserve Board, at Washington.

The Federal Reserve Banks are each required to keep a balance of not less than \$1,000,000 in gold on deposit with the Federal Reserve Board at Washington; but the service of the Board's clearing system for the Federal Reserve Banks has developed so satisfactorily that many times the actual requirement is kept on deposit there. Subsequent to the establishment of the Federal Reserve Banks' clearing system, through the Gold Settlement Fund, provision was made for the Federal Reserve agents to maintain gold balances with the Federal Reserve Board, and clear in the same manner as the banks through the Gold Settlement Fund. In turn, the Federal Reserve Banks maintain a clearance system for the member banks in their respective districts. At first, clearings were conducted weekly, but the volume of business and the war financing necessitated daily clearings which were begun in 1917. Clearings for the Federal Reserve Banks and their member banks are made daily by wire through the Gold Settlement Fund. This is done by book entries, and it has made the shipment of gold between the Federal Reserve Banks unnecessary.

In 1919, "the total expense of operation, including the entire cost of leased wires and salaries of accountants, was approximately \$250,000. This represents the basic cost of effecting the domestic exchanges between the several Federal Reserve districts. A charge of 10 cents per \$100, if generally imposed, would

have involved an expense to the commerce of the country of \$73,984,252."¹

In 1920, the same basic cost of operation amounted to \$370,000, whereas a charge of 10 cents on \$100 would have involved an expense of \$92,625,000.²

The combined clearings and transfers through the fund during the year aggregated \$92,625,805,000 in 1920 and \$73,984,252,000 in 1919.³

The average weekly volume of clearings and transfers in 1920 was \$1,793,584,000 and \$1,422,774,000 in 1919.⁴

The savings on clearings and transfers, while large, is, perhaps, the smallest advantage derived from this service. The fundamental benefits are: the elimination of the risks of the actual transfers of gold, and the time saved by wire transfers and clearings, as against the physical exchange of gold. Under the old national banking system, currency was transferred from one section of the country to another, and from one bank to another, and exchange rates registered the relative demand for moneyed capital in the various sections of the country. Under the Federal Reserve System, this is all consummated by wire transfers and moneyed capital flows freely to the section where needed, almost without any cost for transfer. To illustrate, the seasonal variation in transfers through the Gold Settlement Fund, the statistics of the total transfers by all the Federal Reserve Banks, transfers to and from the New York bank and the net changes in the ownership of the Gold Settlement Fund by representative banks for 1919 and 1920, will be used.

Seasonal Variations in the Total Transfers of all Federal Reserve Banks Through the Gold Settlement Fund in 1919 and 1920

The total transfers through the Gold Settlement Fund compare favorably with the seasonal demands for moneyed capital. In June of 1919, the largest volume of transfers took place, and by reference to Chart V, it is shown that in June the agricultural and live stock paper maturing after 90 days rediscounted

¹ Annual Report of the Federal Reserve Board, 1919, p. 46.

² Ibid., 1920, p. 71.

³ Ibid.

⁴ Ibid.

by the Federal Reserve Banks was by far the largest for any month of the year. The less important peaks in the curve of

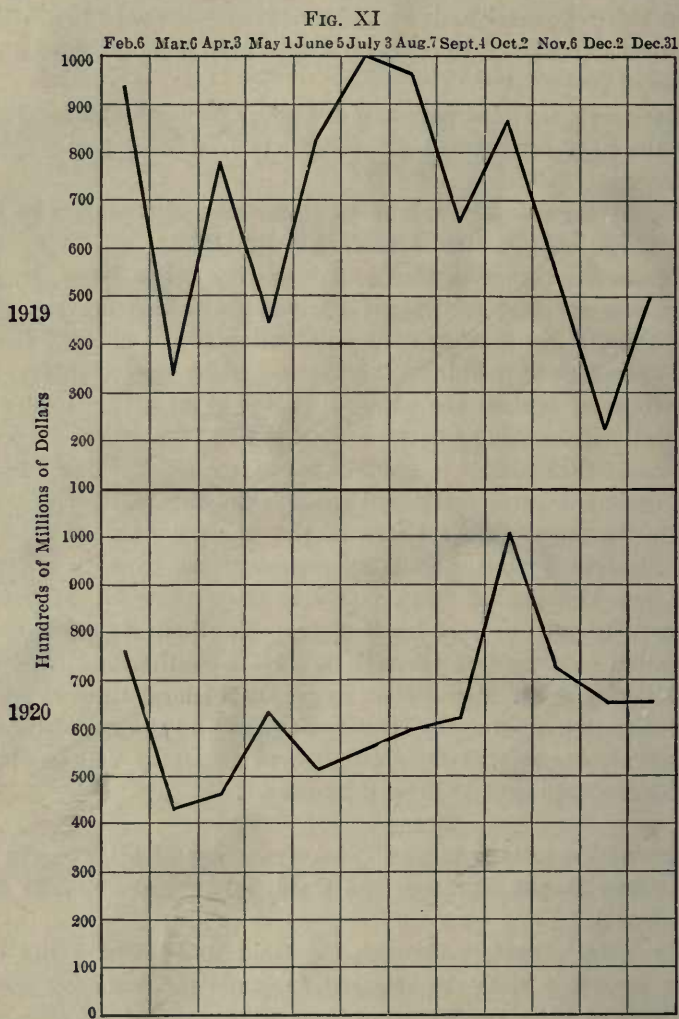


FIG. XII

CHART VI.—Total Transfers Through the Gold Settlement Fund, 1919-1920, All Federal Reserve Banks.

transfers shown on Chart VI for January, March, July, October, and December, are duplicated by the curve for the rediscounts of agricultural and live stock paper on Chart V. This

shows a remarkable correlation between the total transfers through the Gold Settlement Fund and the seasonal demands of agriculture.

In January, when the transfers aggregate \$931,000,000, the funds which had been borrowed by the Federal Reserve Banks in the agricultural districts for moving the crops were transferred to the lending banks, perhaps, New York, Boston, and Chicago.

The March peak of transfers is the response to the demands for March settlements of interest, dividends, rents, and the like; the payment of maturing obligations, as mortgages, notes, and bonds; and the purchase (by the farmers) of seed, fertilizers, and equipment for the spring planting.

The June and July peaks were caused by the transfers of funds to the agricultural districts for the planting of crops, the placing of live stock grazers on the ranches, and the harvesting of spring crops in the south, the settlement of semi-annual interests and dividends, and the payment of maturing obligations, as bonds and mortgages. It should also be observed that the peak load of agricultural and live stock paper, maturing after 90 days, is generally rediscounted in May, June, and July, as shown by Chart V, which identifies the correlation between the transfers through the Gold Settlement Fund and the seasonal demands of agriculture.

The September, October, and December peaks of transfers were the results of loans made to move the crops, purchase live stock, and do the fall seeding of wheat and the like. This corresponds to the autumnal increase in agricultural and live stock paper, rediscounted, for similar purposes, as shown on Chart V, page 202.

The fiscal agency operations for the Government by the Federal Reserve Banks account for very large transfers at definite times. For example, in January, the total transfers aggregate \$931,000,000; and the clearings and transfers aggregated more than a billion a week for the first quarter of the year. This is accounted for by the movement of funds received by the Treasury from the sale of \$4,952,400,000 certificates issued in anticipation of the Victory loan. The peak in transfers and clearings in March is, in part, accounted for by the movement of funds incident to the payment of the first installment of income

and excess-profits taxes to the Government on March 15, which amounted to more than \$1,000,000,000.

The May increase in transfers and clearings was, in part, due to the movement of funds in connection with the payment on the first installment of the subscriptions to the Victory loan. The June peak is accounted for, in part, by the movement of funds incident to the payment of the second installment of the income and excess profits taxes on June 15.

The September peak is, in part, accounted for by the movement of funds in connection with the third installment of income and excess profits taxes on September 15, and the usual annual movement of Government funds in connection with the redemption of outstanding Treasury certificates of indebtedness. The last quarter of the year, heavy movements of funds by the Government continued, and the demand by country banks were larger than usual. These facts show the difficulty, if not utter impossibility, of singling out the seasonal transfers of funds from transfers for other purposes.

In 1920, the principal peaks in the transfers through the Gold Settlement Fund were in January, \$762,000,000; April, \$637,000,000; and September, \$1,045,000,000. In January, the funds for the moving of the crops flowed back to the lending banks. In April, preparation for the spring planting was being made by the purchase of fertilizers, seed, machinery, and the like. In September, the funds were borrowed for harvesting and moving the crops. In other respects, the transfers in 1920 are similar to those of 1919, and a detailed explanation would be repetition.

The Federal Reserve Banks continued to perform this service as fiscal agencies for the United States Government, and the work of the sub-treasuries, which was discontinued by Act of Congress May 29, 1920, was taken over by them on March 1, 1920. Each bank telegraphs the Federal Reserve Board the gross amount collected for every other Federal Reserve Bank and direct settling branch, before the final closing for the day; the settlement is made by the Federal Reserve Board the same day; and telegraphic reports are despatched to each Federal Reserve Bank and direct settling branch, so that they reach them before the opening for business the following morning,

when the books for the previous day are closed. This eliminates the inter-Federal Reserve Bank "float."

On April 10, 1920, the Federal Reserve Board authorized payments through the Gold Settlement Fund by Federal Reserve Banks to the Treasurer of the United States for accounts of member national banks, for credit to their 5 per cent redemption fund against national bank notes to be made in any amount, instead of in even dollars, as previously. This resulted in an immediate increase in the number and volume of such transactions, which were further increased with the discontinuance of the sub-treasuries with which the bulk of such deposits had been carried. The average weekly volume of clearings and transfers of the Gold Settlement Fund in 1920 was \$1,793,584,000.

Seasonal Transfers to and from the Gold Settlement Fund in the Account of the Federal Reserve Bank of New York

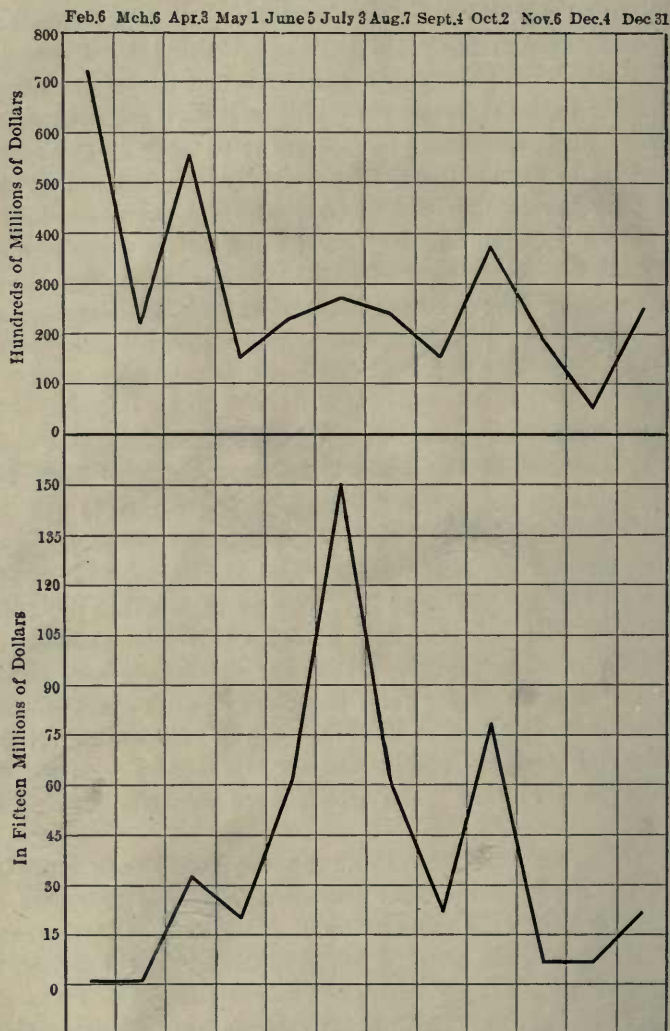
The principal peaks in the transfer of funds to the New York bank in 1919 were in January, \$720,000,000; March, \$564,000,000; September, \$376,000,000; and December, \$247,000,000, as shown by Figs. XIII and XV. All of these peaks are identified with the movements of funds for the Government in connection with war loans, taxes, and the like, which have been pointed out in the analysis of the total transfers of all Federal Reserve Banks in 1919, and cannot be considered as seasonal movements. However, the January peak comes simultaneously with the flow of funds back to New York which were used for moving the crops.

The transfers from the Fund by the New York bank are largest in March, June, and September. These transfers are also identified with the movements of funds for the Government, which have just been pointed out; but March is the month for the payment of quarterly dividends, the settlement of rents, and maturing obligations. In June, dividends and semi-annual interest on bonds are paid; and the farmers are borrowing heavily for the production of crops. In September, the third quarterly dividends are paid, and the agricultural districts demand funds for the harvesting and moving of the crops.

In 1920, the movements of currency for the Government were

materially less than in 1919. The total transfers to the New

TRANSFERS TO. FIG. XIII



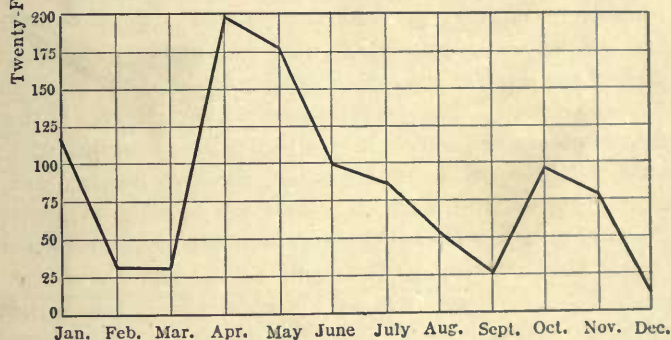
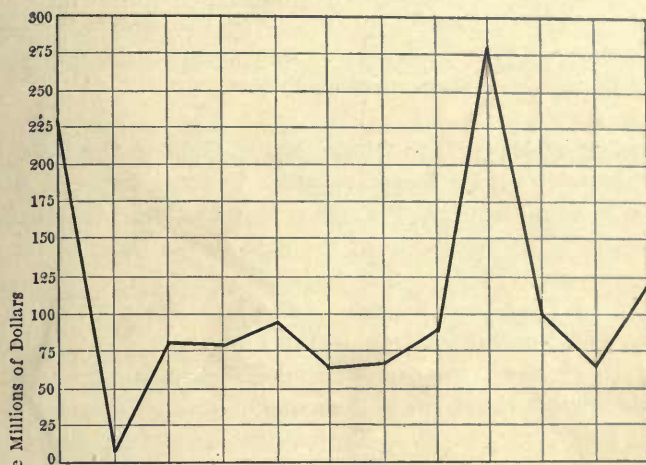
TRANSFERS FROM. FIG. XIV

CHART VII.—Operations Through the Gold Settlement Fund by The New York Bank, 1919.

York bank were \$1,255,000,000 against \$3,448,000,000 the previous year. The principal transfers to the fund of the New York

bank were in January, September, and December. In January, funds borrowed for moving the crops and the New Year investments flowed back to New York. In September, the movement of funds for the Government and the purchase of supplies by

TRANSFERS TO. FIG. XV



TRANSFERS FROM. FIG. XVI

CHART VIII.—Operations Through the Gold Settlement Fund by The New York Bank, 1920.

merchants from other parts of the country, accounted for the heavy transfers to the New York bank. The December transfers were the results of the return of crop moving funds and payments for holiday supplies.

The transfers for funds from New York were largest in January, April, and October; but only in the months of April and

September were these transfers identified with the seasonal demands of agriculture. The purposes have been pointed out and need not be repeated; however, it should be noted that the New York banks were much less affected by the seasonal demands of agriculture under the Federal Reserve System than they were under the national banking system. This was due to the ability of the Federal Reserve Banks in the agricultural districts to supply the needs of their rural customers.

Seasonal Variation in the Ownership of Gold in the Gold Settlement Fund by Representative Federal Reserve Banks by Months, through Transfers and Settlements—1919.

Changes in the ownership of the gold in the Gold Settlement Fund are caused by inter-district settlements between the Federal Reserve Banks and the agents, and intra-district settlements between the Federal Reserve Banks and their member banks. Up to the present, no period in the operations through the Gold Settlement Fund has been representative of seasonal variations. This fund has been continually increasing, due to the popularity and convenience of its service, and the increase in the number of member banks. The enormous fiscal operations of the Government in connection with war finance, and the taking over of the work of the sub-treasuries by the Federal Reserve Banks, have almost submerged the seasonal variations. If it were possible to obtain the statistics of all loans, rediscounts, and settlements, between the several Federal Reserve Banks, and the dates and purposes of each, it would be possible to ascertain rather accurately the inter-district movements of funds and services made possible through the Gold Settlement Fund for the seasonal demands of agriculture, but this information is not to be obtained. Consequently, the analysis of all the changes in the ownership of gold in the Gold Settlement Fund by the several banks will not be attempted in this study, but rather the changes in ownership corresponding with the seasonal demands of agriculture which have been analyzed, will be pointed out.

How the Funds are Transferred between Districts

Changes in the ownership of the Gold Settlement Fund by each Federal Reserve Bank arise from transactions between the

Reserve districts, which are cleared through the Reserve Banks. One of the largest elements in these transactions is the collection and clearance of immense volumes of checks representing the daily turnovers of commerce and industry.

The business and agricultural interests of the country are benefited by these prompt settlements. Suppose, for instance, a merchant in New York deposits in his bank a check for \$100,000 drawn upon a bank in Chicago. Formerly, the check would travel to Chicago, where, upon its arrival, it would be charged to the account of the man who drew it, and his bank would mail the New York bank a New York draft in payment. But the \$100,000 would not be available to the merchant at his New York bank until the check arrived, perhaps four or five days after the merchant deposited the original check. Now, the Chicago bank upon which the check is drawn makes payment to the Federal Reserve Bank of Chicago. The same day, the funds are transferred to the New York Federal Reserve Bank, which, in turn, settles immediately with the bank that presented the check for collection.

The Gold Settlement Fund, with the private wire system connecting the Reserve Banks, provides for the immediate transfer of funds by telegraph, at par. However, such transactions are usually for large sums. A large number of small transactions would clog the system and hamper its efficiency. The use of the wire transfer system is shown by the statement of the New York bank in the following table:

TABLE XIII.—WIRE TRANSFERS MADE BY THE NEW YORK RESERVE BANK
1916 TO 1920⁵

<i>Year</i>	<i>Number</i>	<i>Amount</i>
1916	2,971	\$ 485,000,000
1917	10,302	6,768,000,000
1918	39,099	19,384,000,000
1919	82,321	18,245,000,000
1920	147,302	17,022,000,000

The Gold Settlement Fund has provided for all the separate Federal Reserve Banks and their respective districts the service of daily and hourly interchange of funds. By simple bookkeep-

⁵ These include transfers for the United States Treasury.

ing transactions at the office of the Federal Reserve Board, and immediately by the speed of the private electric wire system, funds are made available in any district where needed. Before the Federal Reserve System no such mobility of funds was possible. The movement between the separate districts will be illustrated by the principal changes in ownership of the Gold Settlement Fund of some of the banks representing industrial and agricultural centers.

New York—1919

The principal decreases in the proportionate ownership of the

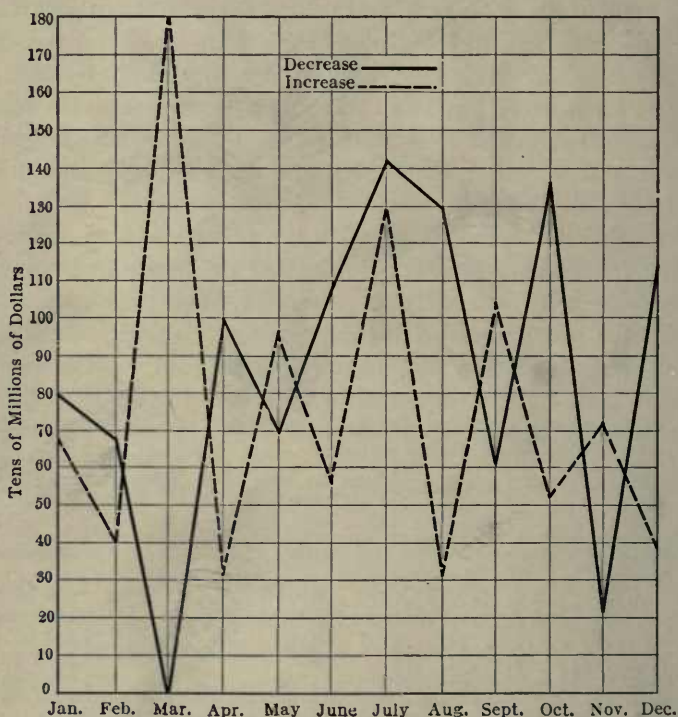


FIG. XVII

CHART IX.—Net Changes in Ownership of The Gold Settlement Fund, 1919, New York.

Gold Settlement Fund by the New York bank in 1919 were in January, April, July, August, October, and December; the prin-

incipal increases were in January, March, May, July, and September.

In January, dividends, interest, and maturing obligations including holiday expenses were paid to all other districts through New York. In April, payments were made for spring supplies; in July and August, correspondents withdrew their deposits, and borrowed, anticipating crop moving; in October further advancements were made from New York for the crop moving, and in December, for the holiday purchases and expenses.

The increase in March was due to the payment for supplies purchased from New York manufacturers and wholesalers by customers of other districts, and the settlement of taxes and fiscal obligations through the New York bank. The May increase was, perhaps, due to settlements for goods already purchased, such as farm equipment and merchandise. The July and September increase was the result of payments for merchandise, investments, and the fiscal operations for the Government; on the other hand the decreases in August, together with those from October to the end of the year, were the result of withdrawals for the crop moving and inter-district transactions.

The fiscal operations of the Government, which have been summarized before, play an important part in the transfers through the Gold Settlement Fund and particularly that of the New York bank, because a large proportion of the Government's fiscal operations are finally settled through New York. However, these are not a part of the seasonal variations, and can only be considered incidentally.

Chicago—1919

The principal decreases in the fund of the Chicago bank were in January, March, May, July, October, and November, corresponding precisely with the increases in the fund of the New York bank, except for October and November. The autumn increase in the New York bank fund was during September.

The January decrease of the Chicago bank's funds was for the holiday settlements and the return of funds to the East for investment after the crop moving. The March decrease was for the settlement of rents, and other spring contracts by farmers. In May, fertilizers and equipment were bought. In July, funds

were arranged for by the Southern states for harvesting and moving the crops. In October and November, settlements were made in the West for live stock slaughtered, and in the East for merchandise and manufactured goods; and heavy loans were also made to other Federal Reserve Banks.

The principal increases in the fund of the Chicago bank were in January, April, July, October, and December. In January and December, settlements were made by the Eastern banks for products such as grain and provisions purchased from the Chicago districts, and the Southern and Western banks repaid the funds borrowed for moving the crops. In April, settlements

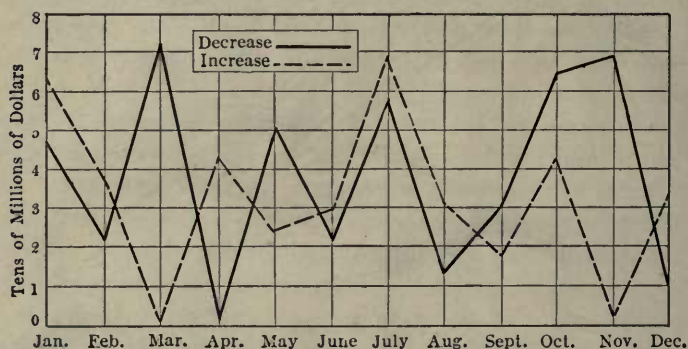


FIG. XVIII

CHART X.—Net Changes in Ownership of The Gold Settlement Fund, 1919, Chicago.

were made from all over the country for fertilizers and farm machinery bought in Chicago. In July, the Chicago district provided for funds to move the crops; and in October, settlements were made for the feeder live stock, grain and provisions bought by other districts.

Minneapolis—1919

The principal decreases in the fund of the Minneapolis bank were in January, March, and October. In January, settlements were made for funds borrowed for the crop moving. In March, settlements were made for rents, interest, and mortgages held outside the district. In October, feeder live stock was brought into the district for the winter feeding, the fall crops were seeded, and winter clothing and supplies were purchased.

The peak increase in the fund was in May. This was for the settlement for grain which had been held in elevators, and which had not been marketed earlier because of the shortage of cars in the Northwest that year, and for other reasons.

San Francisco—1919

The principal decreases in the fund of the San Francisco bank were in February and July. The February decrease is accounted for by the heavy importation of supplies and the preparation for the planting season in the southern part of the district, simultaneous with the settlements of the northern part of the district for crop moving credit. The July decrease was due to the borrowing for the harvesting and marketing of the crops, particularly in California. Also, at this season of the year, large supplies of merchandise are purchased from Chicago and the East. From June to December, the fund increased, the peak increase being in June, August, and November. These increases were accounted for by the settlements made by Eastern banks for Californian products, such as oranges, lemons, raisins, prunes, dried fruits, canned goods, Northwestern apples, and the like.

New York—1920

Neither the increases nor decreases of the New York bank's fund in 1920 were as large as those of the previous year, due primarily to the reduction in the movement of funds for the fiscal operations of the Government. The principal decreases were in February, April, June, and September. The decreases in February, April, and June correspond to the seasonal demands described in 1919. The September decrease was undoubtedly due to the heavy loans made to other Federal Reserve Banks, and particularly in the agricultural districts, where farmers had either been unable to sell, or had not sold their crops due to the slow demand and the decline in prices.

The increases in the fund of the New York bank were largest in February, March, June, and September. The February increase was due to the same causes pointed out for the previous year, namely: the payments for holiday supplies and the return of the funds from the crop moving. In March, June, and Sep-

tember, the increases were partially due to settlements made by other districts, together with the deposits of the receipts of the income and excess profits taxes in the New York bank by the Government, aggregating \$257,570,000 in March, \$248,615,000 in June, and \$233,195,000 in September.⁶

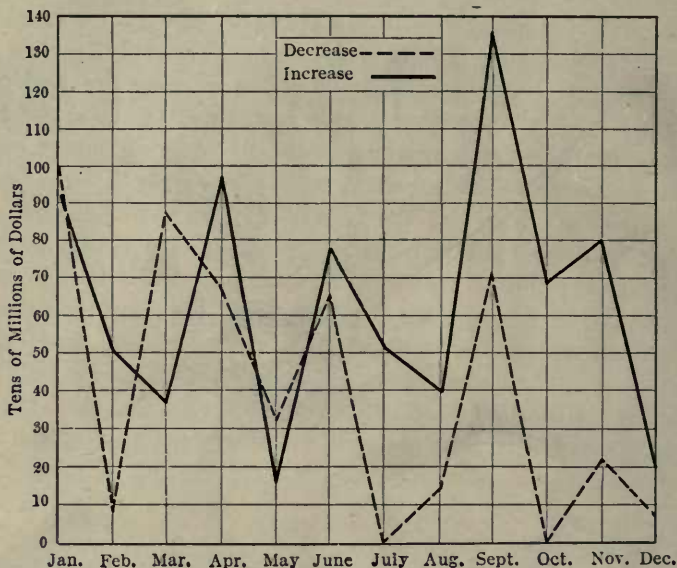


FIG. XIX

CHART XI.—Net Changes in Ownership of the Gold Settlement Fund, 1920, New York.

Chicago—1920

The Gold Settlement Fund of the Federal Reserve Bank of Chicago decreased in very large volumes for each month of the first quarter of the year, and in June and September. The decreases for January, February, and March were accounted for in part by settlements made with other Federal Reserve Banks, but the largest volume of the decrease was due to loans to other Federal Reserve Banks. The largest decrease during the year was in January. The loans to other Federal Reserve Banks January 1st were \$19,270,000, and January 15th \$67,500,000. February 2nd, loans to other banks aggregated \$48,800,000, and

⁶ See Annual Report of the Federal Reserve Board, 1920, p. 393.

February 14th, \$42,195,000. March 1st, loans to other Federal Reserve Banks aggregated \$28,535,000 and March 15th \$18,690,000. It should be observed that the decrease in the fund was larger in March than in February, but the loans to other Federal Reserve Banks were considerably less. This is accounted for by the March settlements of rents; and the payment of mortgages to holders outside of the Chicago district. The June decrease cannot be accounted for by loans to other banks, because none were made; but this decrease is easily accounted for by the mid-year settlements of interest, installments on mortgages held outside the district, and the like.

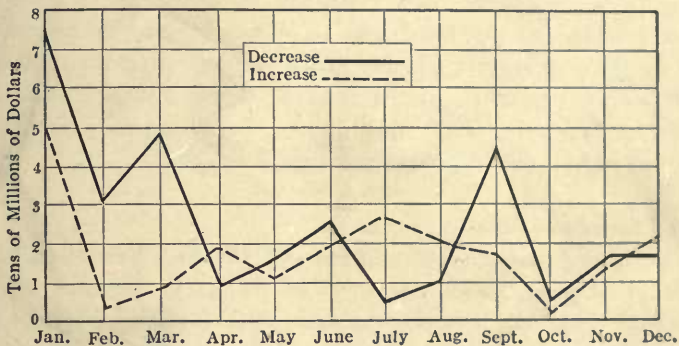


FIG. XX

CHART XII.—Net Changes in Ownership of the Gold Settlement Fund, 1920, Chicago.

Like the June, the September decrease was not due to loans, but was accounted for by the withdrawal of funds for the crop moving from banks in the district by correspondents of the South and West.

The largest increase in the fund of the Chicago bank in 1920 was in January. Other minor increases were in April, July, and December. The January increase was due to the return of the funds withdrawn for the crop-moving in the South and West by correspondents with Chicago banks and, also, to the payments for supplies purchased from the Chicago district, and to the holiday season. The April increase was, perhaps, due to the repayment of funds borrowed by other Federal Reserve Banks and to the farmers' purchase of fertilizers and farm machinery in the southern and western districts. The increase was due in a large

part to the rediscounting with other Federal Reserve Banks aggregating \$29,477,500 July 1st and \$17,053,500 July 15th. The increase in December was due to the same causes enumerated for January.

Minneapolis—1920

The peak decrease in the fund of the Minneapolis bank was in April. In this district, April is the month for settling spring contracts, paying rents, buying farms and farm supplies such as fertilizers, seed, and machinery. Most of the supplies are bought outside the district, and many of the contracts and maturing obligations are made with residents of other districts. The peak increase in the fund was in January, and is accounted for by the payments made for grain shipped to other districts. The narrow variations in the fund of the Minneapolis and St. Louis banks during 1920 were due to the slump in prices, and the accompanying decline in business activities.

San Francisco—1920

The largest decreases in the fund of the San Francisco bank were in January and April. The January decrease is accounted for by the settlements made with Eastern districts for holiday supplies, and the purchase of equipment for the spring planting in the southern part of the district. The April decrease was perhaps due to payments made to other Reserve banks in connection with the Victory Liberty loan floated during that month, and to the movement of currency out of California before the assessor makes his rounds in April, because of the tax on currency which has been explained earlier in this work. The largest increases in the fund were in March, June, September, and October. The March increase is accounted for by the settlements made by other districts for spring fruits and vegetables from the southern part of the San Francisco district, and particularly Southern California. The increase in June was, in like manner, due to the payments received for the heavy shipments of the new citrus fruit crop. From August until the end of the year, the increases in the fund were large; the peak of the autumn increases was reached in October. These increases were accounted for by the payments made from other districts

for shipment of fruits and vegetables; as, citrus fruits, Northwestern apples, dried fruits, raisins, prunes, cherries, grapes, and canned goods. Also, large quantities of grain are shipped east from this district, and particularly from the Northwestern states.

CHAPTER XVII

DISCOUNT RATES OF THE FEDERAL RESERVE BANKS FROM THE DATE OF ORGANIZATION TO THE END OF THE YEAR 1919. HIGH AND LOW RATES ON 61 TO 90 DAYS PAPER, AND AGRICULTURAL AND LIVE STOCK PAPER MATURING AFTER 90 DAYS, COMPARED

Upon the opening of the Federal Reserve Banks, November 16, 1914, problems of a discount policy, and discount rates for the several banks at once arose. What should the discount rate or rates be, not only at the several banks, but on the several classes of paper? What effect should the length of maturity, character of the security, and liquidity of the paper offered for discount at the Federal Reserve Banks have upon the rates? Should there be uniform rates for all districts, or should the rates for the several districts differ as circumstances might dictate?

There was no standard or former experience by which the Federal Reserve Board or the banks could fix the proper rates at the opening of the system. However, it was felt that the rates should be started too high, rather than too low; because it would be less difficult for a new system to lower the rates than to raise them; consequently, by examining the discount rates at the opening of the banks, they are found to be the highest on record, up to the end of the year 1919. The first year the high rate was 6 per cent in all the banks, except Atlanta, Minneapolis, Kansas City, Dallas, and San Francisco, where the high rate was $6\frac{1}{2}$ per cent. From this high level, the rates declined until the highest of all banks, except San Francisco, were between 4 and 5 per cent, in 1916. San Francisco's high rate was 6 per cent for agricultural and live stock paper maturing after 90 days, and $4\frac{1}{2}$ per cent for all other paper.

During 1915, the Federal Reserve Board endeavored to "develop a consistent discount policy, graduating its rates according to the maturity and the character of the paper discounted or

purchased in the open market.”¹ During the year, the rates were rapidly reduced, and successful steps were taken toward uniform rates for the whole country—that is, a consistent relation one to another, of the rates in the several districts. To maintain the same rates in all districts would be impracticable. The eastern districts have larger savings than the western and southern districts, and, consequently, a larger demand for short-term paper at lower rates; also, loans to a clothing merchant in Boston or live stock farmer in Illinois are less speculative than loans to men in similar businesses in the sparsely settled districts of North Dakota, Montana, or Idaho, where the climatic and business conditions are very uncertain.

At the close of the year 1915, the rates for paper with 61 to 90 days maturity were 4 and $4\frac{1}{2}$ per cent and agricultural and live stock paper maturing after 90 days, $4\frac{1}{2}$ to 6 per cent. However, in part, the lowering of rates was due to the inflow of gold from foreign countries, as a result of the war, which had brought about the heavy demand for American products and materials, and, consequently, a large balance of credit in favor of the United States.

To follow the policy of the Federal Reserve Board and the several banks in regard to discount rates would be very interesting, but the problem under consideration is that of the rates for agricultural and live stock paper maturing after 90 days, compared with paper of 61 to 90 days' maturity, and an analysis of the other problems must necessarily be eliminated from this study.

Boston

The discount rates for agricultural and live stock paper maturing after 90 days declined from the high level of 6 to 5 per cent in 1915, and remained at this figure throughout the five years under consideration.

The rate for paper with a 61 to 90 days' maturity declined from a high rate of 6 to 4 per cent in 1915, and remained at 4 per cent until 1917, when the high increased to 5, and the low remained 4. In 1918, the high rate was 5 and the low $4\frac{3}{4}$, but in 1919 the high declined to $4\frac{3}{4}$ and the low remained $4\frac{3}{4}$.

¹ Annual Report of the Federal Reserve Board, 1915, p. 5.

The straight rates on the agricultural and live stock paper, after the decline from the high of 1915, are accounted for by the fact that this class of paper is a negligible factor in the rediscounts of the Boston bank. The higher rates paid on this class of paper, in general, were due to the longer term, for which an additional charge would ordinarily be expected in commercial banking.

The changing rates of paper maturing between 61 and 90 days were due to the fluctuating supply of this class of paper offered for rediscount. The rates for all classes of paper would have increased more than they did, had it not been for the shipments of gold from foreign countries to the United States, in payment of their balances for manufactured goods and war materials.

New York

The rates of the New York Federal Reserve Bank for agricultural and live stock paper took precisely the same trend during the period under discussion as those of the Boston bank, and are accounted for by the same economic reason. The New York rates for paper with 61 to 90 days' maturity, however, differed from the Boston rates in not reaching a high rate above $4\frac{3}{4}$ and a low of $4\frac{1}{2}$ per cent in 1918, being in each case $\frac{1}{4}$ per cent below the Boston rate.

The low rate on commercial paper maturing within 90 days was influenced by the rate at which the Government was financing. The New York bank adopted the policy that "in view of the Government's policy of financing at low rates of interest, the Federal Reserve Bank should maintain steady and correspondingly low discount rates, and endeavor in individual cases to check any tendency toward taking advantage of the low rates for the mere purpose of profit making."²

In proportion to the aggregate of rediscounts, agricultural and live stock paper maturing after 90 days is an item of minor importance in the New York bank; however, the general higher rate charged is justified by the length of maturity.

² Annual Report of the Federal Reserve Board, 1918, p. 318.

Philadelphia

The rate on agricultural and live stock paper maturing after 90 days at the Philadelphia bank declined from a high rate of 6 to a low of $4\frac{1}{2}$ per cent in 1915, and remained at a low level throughout 1916. In 1917, the rate showed a high of 5, and a low of $4\frac{1}{2}$ per cent, and stood at 5 per cent for both high and low throughout the two following years.

The rate for paper maturing between 61 and 90 days declined from the high rate of 6 to 4 per cent in 1915, and stood at 4 in 1916, but reached a high of $4\frac{1}{2}$ in 1917 and $4\frac{3}{4}$ the two following years. The low in 1917 remained at 4 per cent, but increased to $4\frac{1}{2}$ in 1918 and $4\frac{3}{4}$ in 1919.

The increase in the rate for agricultural and live stock paper to the high rate of 5 per cent in 1917 is difficult to account for, because the amount of this class of paper rediscounted was \$30,900, against \$43,000, the previous year. However, as the rates for 90 days' maturity also increase it may be accounted for by the increase in the total volume of paper rediscounted, and the resulting increase in the rates for all classes of paper. The two following years, the rate on farmers' paper maturing after 90 days remained steady at 5 per cent, while the rate for paper maturing under 90 days showed a gradual increase. The longer term granted on agricultural and live stock paper accounts for this higher rate.

Cleveland

The discount rate of the Cleveland bank declined from the high of 6 to the low of 5 per cent in 1915, and remained steady at 5 per cent until 1918, when the high increased to $5\frac{1}{4}$ and at which rate both high and low remained during 1919.

The rate for paper with 61 to 90 days' maturity declined from the high rate of 6 to a low of $4\frac{1}{2}$ per cent in 1915, and remained at the low rate until 1918, when the high increased $\frac{1}{4}$ per cent, at which rate both high and low stood in 1919.

The general higher rates of agricultural and live stock paper were due to the longer term required. The increase in the rate in 1918 was perhaps due to the general increase in the volume of all classes of paper rediscounted with the Reserve Bank, and

particularly that of farmers maturing after 90 days, the volume of which was \$1,078,100, against \$67,000 the previous year. The rates for 61 to 90 day paper increased at the same time, and for the same economic reasons.

The higher rates prevailing in 1919 were due to the continued increase in the total volume of paper offered for discount. However, the volume of agricultural and live stock paper maturing after 90 days decreased to \$344,400 in 1919; but the rates remained steady at $5\frac{1}{4}$ per cent, due to the seasonal and less flexible character of this class of paper.

Richmond

The discount rates of the Richmond bank for agricultural and live stock paper declined from the high rate of 6 to a low of 5 per cent in 1915. In 1916, the high was 5, and the low $4\frac{1}{2}$ per cent. In 1917, both high and low were $4\frac{1}{2}$ per cent; but in 1918, the high increased $\frac{1}{2}$ per cent, and both high and low remained at 5 per cent during 1919.

The rates for paper maturing between 61 and 90 days declined from 6 to 4 per cent in 1915, and both rates stood at 4 per cent in 1916. The high increased $\frac{1}{2}$ per cent in 1917, and in 1918; but declined $\frac{1}{4}$ per cent in 1919. The low was 4 per cent in 1917, but increased $\frac{1}{2}$ per cent in 1918 and $\frac{1}{4}$ per cent in 1919.

The declines in the rates for agricultural and live stock paper in 1916 and 1917 were due to the rates starting at entirely too high a level, and the encouragement of farm production in 1917 sought by the liberal policy dictated by the Federal Reserve Board, and acted upon by the Federal Reserve Banks. However, it is observed that the high for 61 to 90 days' maturity increased $\frac{1}{2}$ per cent over the previous year. This was due to the large volume of this class of paper offered for rediscount. The rates for farmers' long paper would have increased had they not had a preferential rate in the agricultural districts. With the exception of the low rate of the agricultural paper, both classes of paper increased $\frac{1}{2}$ per cent in 1918. However, the rates for both classes of paper were the same. The commercial paper rates increased, due to the increase in volume, and the farmers' paper did not, perhaps because of its preferential character; in spite

of this fact, the volume aggregated \$3,099,800, against \$1,295,500 the previous year. In 1919, the increase of $\frac{1}{4}$ per cent on commercial paper and $\frac{1}{2}$ per cent on the low of agricultural paper is accounted for by the tightening up of the lines of credit, and the increase in the volume of all paper offered for rediscount. However, the volume of farmers' paper maturing after 90 days decreased to \$1,689,000, which indicated that the preferential rate offered to stimulate agricultural production had been discarded.

Atlanta

The high rate for both classes of paper started at $6\frac{1}{2}$ per cent. This was due to the prevailing higher rates in the district. But, curiously enough, the rates declined to 4 per cent for 61 to 90 days' maturity, and $4\frac{1}{2}$ for farmers' paper maturing after 90 days in 1915. This is worth commenting upon, in behalf of the service of the Federal Reserve System, particularly because the farmers of the Atlanta district were passing through an unfavorable situation in foreign cotton markets, due to the disturbance by the European War. In 1916, both rates on agricultural paper increased to 5 per cent and remained at this figure until 1919, when the high increased $\frac{1}{2}$ per cent. The rates for 61 to 90 days' paper stood at 4 per cent in 1916. The high increased $\frac{1}{2}$ per cent in 1917. In 1919, the high increased $\frac{1}{4}$ and the low $\frac{1}{2}$ per cent, and in 1919 both rates stood at $4\frac{3}{4}$ per cent.

The flat rate for farmers' paper maturing after 90 days, from 1916 to 1918 inclusive, is accounted for by the preferential given farmers' paper to stimulate production, during these years. The increase of $\frac{1}{2}$ per cent in the high rate in 1919 was due to the increased volume of this class of paper and the tendency of the bank to remove the preferential rate. The increase of $\frac{1}{2}$ per cent in the commercial high rate in 1917 was due to the vast increase in the volume of this class of paper. In 1918, the additional increase of $\frac{1}{4}$ per cent in the high rate and of $\frac{1}{2}$ per cent in the low was due to the increased volume of this class of paper offered for discount, and the tendency to discriminate against non-essential commercial activities. The flat rate of $4\frac{3}{4}$ in 1919 indicated the tendency to tighten the lines of credit due

to the remarkable increase in the total volume of paper offered for discount. However, the low rates maintained in the Atlanta district where farmers have been known to pay 40 per cent for store credit, indicates that the Federal Reserve System has remarkably improved the credit situation in the agricultural districts of the South.

Chicago

The high rate of 6 per cent on discounted agricultural and live stock paper maturing after 90 days at the Chicago bank in 1915, declined to a low of 5 per cent, and both rates stood at 5 per cent in 1916. Thus, the high advanced $\frac{1}{2}$ per cent in 1917, and the two following years both high and low stood at the flat rate of $5\frac{1}{2}$ per cent.

The rates for commercial paper maturing between 61 and 90 days declined from the high of 6 to $4\frac{1}{2}$ per cent in 1915, and both rates stood at $4\frac{1}{2}$ in 1916. The high increased $\frac{1}{2}$ per cent in 1917, and the low $\frac{1}{4}$ per cent in 1918. In 1919, both rates stood at $4\frac{3}{4}$ per cent.

The decline from the high rate of 1915 was the search for normal rates, as was the case of the other Federal Reserve Banks. The increase of $\frac{1}{2}$ per cent in the high rates of both classes of paper in 1917 was due to the remarkable increase in the volume of paper offered for discount. The agricultural and live stock paper maturing after 90 days, discounted by the Chicago bank, aggregated \$7,551,400 in 1917, against \$2,949,400 in 1916.

In 1918 and 1919, while the commercial rates increased, the flat rate of $5\frac{1}{2}$ for the farmers' long paper is accounted for by the preferential consideration given to this class of paper in the Chicago district. The general higher rate charged on this class of paper is necessarily due to its longer term.

St. Louis

The St. Louis discount rates declined from the high rate of 6 for both classes of paper to 5 for farmers' long paper, and 4 for commercial paper, in 1915. In 1916, the low for agricultural paper declined another $\frac{1}{2}$ per cent and the commercial rates remained at 4. In 1917, the high for the agricultural paper advanced to $5\frac{1}{2}$ and the commercial to $4\frac{1}{2}$ per cent. For the fol-

lowing two years the rates for the farmers' long paper stood at $5\frac{1}{2}$ per cent, and the commercial rates $4\frac{3}{4}$, except the low of 1918, which was $4\frac{1}{2}$.

The decline in the low for agricultural paper to $4\frac{1}{2}$ in 1916 and the increase in the high to $5\frac{1}{2}$ in 1917 are difficult to account for, unless the Reserve Bank was just experimenting or searching for normal rates. The increase in 1917 was accompanied by a similar increase in the high for commercial paper maturing between 61 and 90 days, and, perhaps, was due to the increase in the volume of all paper offered for discount. However, the volume of agricultural and live stock paper, maturing after 90 days, offered for discount, was less than that of the previous year. The tendency toward increasing rates in 1918 and 1919 is accounted for by the vast expansion in the volume of paper offered for discount. The general higher rate for agricultural and live stock paper maturing after 90 days was due to the longer term, as previously explained.

Minneapolis

Like the Atlanta bank, the Minneapolis bank started its discount rate at $6\frac{1}{2}$ per cent in 1915, due to the general higher level for interest and discount rates in this section of the country. However, the rates declined in 1915 to 5 per cent for farmers' paper maturing after 90 days, and $4\frac{1}{2}$ for commercial paper maturing between 61 and 90 days, and remained flat at this level for both classes of paper through 1916. The decline was due to the search for normal rates. In 1917, the high rates advanced $\frac{1}{2}$ per cent, and in 1918 the low advanced $\frac{1}{2}$ per cent. The rates for both classes of paper stood flat at $5\frac{1}{2}$ and 5 per cent in 1918 and 1919.

The advance in rates in 1917 was due to the increase in volume of paper offered for discount as in the two succeeding years. The low rates for farmers' long paper were due to preferential rates granted this class of paper during the war to stimulate necessary production. Like the rates of the Atlanta bank, the Minneapolis bank rates illustrate the service of the Federal Reserve System to the agricultural districts. Under the national banking system, stories of 12 to 20 per cent paid by farmers for bank credit were heard in the district of the Minneapolis bank,

but the discount rates are now on about the same level as those of other agricultural districts.

Kansas City

The Kansas City bank, in search for a normal rate, started at $6\frac{1}{2}$ per cent, and declined to 5 per cent for farmers' long paper, and 4 for commercial paper maturing between 61 and 90 days in 1915. The high of the commercial paper increased to $4\frac{1}{2}$ in 1916 and the low $4\frac{1}{2}$ in 1917, while the rates for agricultural long paper remained flat at 5 per cent for 1916 and 1917. In 1918 the high of the commercial paper advanced to $5\frac{1}{4}$ and the agricultural to $5\frac{1}{2}$. In 1919, the high of the commercial paper declined to 5, and the low advanced to 5 per cent; and the low of the agricultural paper advanced to $5\frac{1}{2}$.

The tendency towards increasing rates for both classes of paper during 1918 and 1919 was due to the vast expansion in the volume of paper offered for discount. The rates might have gone higher in 1918, had it not been for the desire to stimulate necessary production. But in 1919, after the war was over, rates increased very little, due to the undesirability of thwarting productive and commercial undertakings, which had been stimulated by the low war time rates. The Kansas City district is another section of the country where, under the national banking system, prevailing rates were very high, due to the scarcity of loanable funds in this section of the country; but under the Federal Reserve System, the rates do not differ materially from those of other sections of the country.

Dallas

The discount rates of the Dallas bank declined from the high level of $6\frac{1}{2}$ per cent to 4 per cent for commercial, and $4\frac{1}{2}$ for agricultural paper in 1915, and stood flat at these rates through 1916. In 1917, the rates on agricultural paper and the high of commercial paper advanced $\frac{1}{2}$ per cent. In 1918, the high of agricultural paper advanced $\frac{1}{4}$ and the low $\frac{1}{2}$ per cent, and both rates advanced $\frac{1}{2}$ per cent for the commercial. In 1919, the low of the commercial advanced $\frac{1}{2}$ and the agricultural $\frac{1}{4}$ per cent.

The decline from the high rates of 1915 was due to the search

for normal rates. This is particularly interesting, from the standpoint of the rates for farmers' long paper, because at this time the agricultural situation in the cotton growing states was very unfavorable, due to the international situation which had restricted the foreign market for the American crop. The tendency toward an increase in rates for both classes of paper from 1917 to 1919, inclusive, is accounted for by the unprecedented expansion in the volume of all classes of paper offered for discount. The discounting of agricultural and live stock paper is the chief function of the Dallas bank, and it is striking how these rates have been held down with the increasing volume of this class of paper each year. This is accounted for by the prosperity of the cotton and live stock farmers from 1917 to 1919, inclusive, the preferential rates for farmers' paper to stimulate necessary production during the war, and the service of the Federal Reserve System in reducing and equalizing the rates throughout the country. Under the national banking system, interest and discount rates for paper in this section of the country were very high; rumors of rates varying from 12 to 24 per cent were reported. But under the Federal Reserve System the rates for farmers' long paper have been only a fraction above the rates for long commercial paper, and the difference is due to the longer term granted to farmers' paper.

San Francisco

Discount rates of the San Francisco bank declined from the high level of $6\frac{1}{2}$ per cent to 6 per cent for agricultural and live stock paper maturing after 90 days, and $4\frac{1}{2}$ per cent for commercial paper maturing between 61 and 90 days, in 1915. The low for the agricultural paper declined to $5\frac{1}{2}$ in 1916, and both rates for this class of paper stood at this level throughout the following three years. Both rates for the commercial paper stood at $4\frac{1}{2}$ during 1916 and 1917; but the high advanced $\frac{1}{2}$ per cent in 1918 and the low $\frac{1}{4}$ per cent in 1919.

While the discount rates of the San Francisco bank declined from the initial high rates in 1915 in an endeavor to adjust to normal rates, the general level of the rates for both classes of paper remained higher throughout the period under consideration than in any of the other Federal Reserve Banks. The

reasons for this are, perhaps, the vast expanse of territory covered by the district of the San Francisco bank, the larger portion of which is an agricultural district sparsely settled in many parts, and the paper offered for discount is in small denominations. However, few other Reserve banks show less change in discount rates than San Francisco. In 1918, special preference was given to the wool and grain paper from the northern part of the district.³ The harvesting and marketing of the fruit crops of California and the northern part of the district create large volumes of paper for rediscount with the Federal Reserve Bank. The cotton and rice crops of the southern part of the district also come in for their share of credit; and live stock farming and dairying are the growing agricultural industries in this district; they draw heavily upon the banks for short time credit. However, the narrow margin of difference between the agricultural and commercial rates of the San Francisco bank is accounted for by the preferential rates awarded farmers to stimulate necessary production, and the longer term required by the farmers' paper.

³ Annual Report of the Federal Reserve Board, 1918, p. 731.

CHAPTER XVIII

AVERAGE RATES OF INTEREST CHARGED BY BANKS ON SHORT TERM FARM LOANS IN THE SEVERAL STATES IN THE GEOGRAPHICAL DISTRICTS, JULY 1, 1918

In July, 1918, the highest discount rate charged by any of the Federal Reserve Banks for agricultural and live stock paper maturing after 90 days was $5\frac{1}{2}$ per cent. At the same date, the average usual rate charged farmers on all short-term loans of \$100, or over, varied from 5.88 per cent in Connecticut to 10.22 in New Mexico. The rate of 10.22 in New Mexico is not difficult to account for; however, the average rates of 7.24 in Iowa and 9.52 in North Dakota are less easily explained.

The factors affecting the rates of interest charged farmers by local banks may be roughly enumerated as follows:

1. The scarcity of deposits in the rural districts makes it a matter of policy for the banks to maintain high rates, in order to eliminate unnecessary credit and thus keep enough liquid assets to meet the daily demands of the depositors.

2. The farmer is not generally in such close contact with the local banker as the business man.

3. The paper offered by local bankers for rediscount must conform to specific requirements. This necessitates a bank's keeping its rates up; so that undesirable, or too large a volume of credit, will not be demanded.

4. The local banker has practically a monopoly of the finances in his community. This is particularly true of the southern and western states, where the population is scattered over a wide area and seldom more than one bank is found in each country town.

5. The irregular and unbusinesslike habits of the farmers in the payment of their loans justifies the bankers in charging a high rate to compensate them for the farmer's negligence.

6. Farmers need a longer time for short term credit than

that of commercial enterprises. This long term maturity of farmers' notes ties up the bank's resources and, unless disproportionate rates are charged which discourage considerable bor-

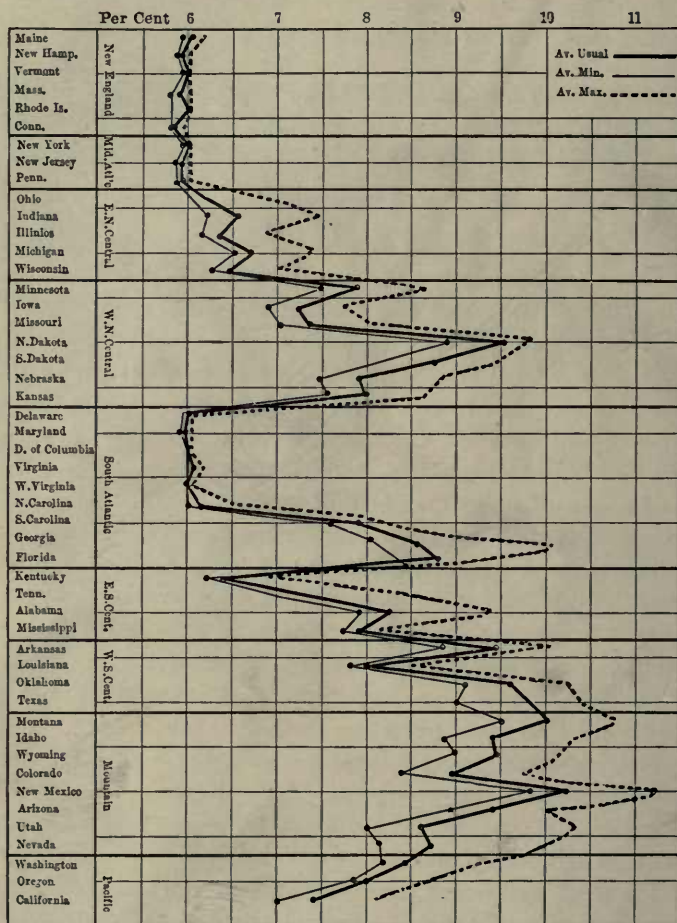


FIG. XXI

CHART XIII.—Average Rates of Interest, July 1, 1918. Statistics Courtesy of U.S.D.A.

rowing by farmers, the banker will find himself in an embarrassing situation when customers ask for cash.

7. Loans to farmers in many sections of the country are very speculative, for example: the frequent drought-stricken areas of

Texas and Montana, and the weevil infested areas of the cotton-growing states; consequently, higher rates are justifiable.

8. The local bank that is not a member of the Federal Reserve System and is not able to rediscount its paper with some large city bank correspondent, is greatly hampered in its ability to meet demands beyond very definite limits, no matter how secure the paper is.

9. The size of the loan is an important consideration in the rate charges. It costs as much overhead, clerical service, time, insurance, and the like, to make a loan of \$10.00 as of \$10,000, and often because of the necessary safeguards thrown around small loans, the costs for making them are greater than the larger loans. This is ample justification for a higher interest rate.

10. If the farmers were organized and borrowed collectively, the rates should be less than to any individual, because the cost of making the loan to a group is much less than it would be to make a separate loan to each farmer, and the security of the group is considered much more reliable than that of an individual farmer.

11. The natural conditions and the character of the type of farming practiced will influence the rates of interest. Where the soil is poor or the farming speculative, as a one-crop district or fruit growing section, the loans for productive purposes will be higher than in a rich, fertile soil, where diversified farming is practiced and crop failures are not frequent.

12. The character of the farmer himself, when known to the local banker, influences the rate of interest. A farmer who has a reputation for honesty and thrift, is prompt in the payment of his debts, and does careful, up-to-date farming, will be granted a preferential rate over the more dubious.

Despite the economic necessity for charging high rates at times, the usury laws often cause the banks some inconvenience. A bank is forbidden by law to charge more than a fixed rate of interest. The common legal rate in the United States is 6 or 7 per cent per annum. But the bankers are rather ingenuous people, and they have devised many very successful schemes for evading the usury laws. Almost all of these schemes may be roughly grouped under the headings of "commissions," "fees,"

“bonuses” and the like. These are advanced charges for transacting the business, and in many cases seem quite justifiable. Without doubt, it is more expensive to make a loan to a questionable customer than to an old reliable customer. This does not mean that farmers are questionable customers, but very often they are slow to pay their debts and unbusinesslike to deal with, all of which makes loans to them expensive.

New England, East North Central States, and Delaware, Maryland, District of Columbia, Virginia, and West Virginia

The factors affecting the interest rates on short term bank loans to farmers explain, in a large measure, the reasons why the rates in New England, the Middle Atlantic states, and a number of the South Atlantic states, namely, Delaware, Maryland, District of Columbia, Virginia, and West Virginia, average around 6 per cent, and the average rates in all other states are higher. The states which have an average rate of around 6 per cent are the oldest and most densely settled parts of the country, and, with the exception of Virginia, Pennsylvania, and New York, are not very important as agricultural states. However, the farming in these states is diversified but conservative, and in general, operations are on a small scale. The savings in these states are very large, and the banks usually have a surplus adequate to meet all the local needs at moderate rates of interest. The farmers deposit very freely in banks in these states, and there is less buying of land, machinery, and other fixed equipments than in the Prairie states.

East North Central

The East North Central states comprise, perhaps, on the whole, the most all around prosperous agricultural section of the United States. There is some poor soil, as in Southern Illinois and Indiana, and still some pioneer settlements in Northern Michigan and Wisconsin. However, in spite of these inferior areas, the usual average rate of interest charged by banks to farmers for short term loans is less than $6\frac{1}{2}$ per cent, and the average maximum rate is around $7\frac{1}{4}$ per cent.

The farmers in these sections borrow quite universally and in large amounts; in fact, many of the country banks are owned

by them. In these states, large investments are made in lands, buildings, drainage, and expensive farm machinery; but the farm income is sufficient to enable the farmers to make large bank deposits when their crops and live stock are marketed. However, in the pioneer sections of Northern Michigan and Wisconsin, the savings are very small; and the settlers use all their income to pay for the land and make fixed improvements. It is in these sections that the interest rates are high. Reports have been made of interest rates ranging from 12 to 14 per cent in Northern Wisconsin. These high rates in the pioneer and poor farming sections increase the general average rates for the whole district.

West North Central

The chief farm products produced in this group of states are wheat, corn, cattle, and cotton. With the exception of Iowa, which is primarily a corn and live stock state, the principal product is wheat. In Northern Minnesota, the Dakotas, Western Kansas, and Nebraska, the population is very sparse and there is much pioneer farming. The whole district is subject to frequent droughts. The bank deposits are small because the farmers invest almost all of their income in lands, high priced machinery, and fixed equipment. They demand credit in large amounts for the purchase of supplies, the production and marketing of crops. Some of this credit, which is used for the harvesting and marketing of crops, will mature within 90 days; but a large portion, which is used to purchase supplies and produce crops, or feed live stock, is needed for six months or a year. The banks are compelled to borrow from their eastern correspondents, and rediscount paper maturing within six months with the Federal Reserve Banks, in order to meet the necessary demands of the farmers. These conditions account for the high rates of interest charged by banks in this district. The usual lowest average rate July 1, 1918, was 7.24 per cent in Iowa, and the highest was 9.52 in North Dakota. The maximum average rate exceeded the average usual rate from $\frac{1}{2}$ to 1 per cent. The average minimum rate is less than $\frac{1}{2}$ per cent under the usual rate in most of the states. The difference in rates between the *safest*, *usual*, and *most speculative* loans, is, indeed,

very small, considering the difference in the risk. The low rates in Iowa and Missouri are due to a better class of farming in these states. The high rates in the Dakotas are accounted for by the speculative one crop (wheat) system, which makes the farmers' income irregular and uncertain.

South Atlantic

The interest rates in five of the South Atlantic states have been analyzed in comparison with the rates of the New England and Middle Atlantic states. Here, it will only be necessary to consider the rates for North and South Carolina, Georgia, and Florida. The principal money crops of North and South Carolina are cotton and tobacco; of Georgia, cotton, peaches, and vegetables; and of Florida, citrus fruits.

A large portion of the farmers and most of the farm labor in these states are negroes and mulattoes, who are not very thrifty; thus, the rural communities are proportionately unprogressive. The crops are very uncertain, due to insect pests, and the prices are equally dubious, due to market fluctuations. The banks in the rural communities are small and have little competition, the deposits are small and irregular, and many of the rural population are unacquainted with the economic functions of deposit banking; therefore, a large number have not learned to use the check and deposit system.

Loans to these farmers are, perhaps, not exactly speculative, but exceedingly uncertain in regard to the time of settlement. These conditions justify bankers in charging high rates, in order to eliminate the less desirable loans and maintain their deposits at a level which will enable them to meet the demands of depositors.

The average usual rates charged by bankers in the states under consideration vary from 6.16 per cent in North Carolina to 8.68 in Florida. The average maximum rates vary from 6.53 in North Carolina to 10.02 in Georgia. Obviously, more commissions and fees are charged on bank loans in Georgia than in the other states. The lower rates in North Carolina are accounted for by the more uniform climate in this state, and the competitions of credit unions with the banks.

The savings deposits of the banks in all the states under con-

sideration are kept down, due to the lack of diversified farming and the consequential shipments of currency out of these communities to pay for provisions bought from the North and West.

East South Central

This group of states comprises the live stock and tobacco farms of Kentucky, the cotton fields and peach orchards of Tennessee and Alabama, and the cotton, rice, and sugar cane fields of Mississippi. Kentucky is characterized by a good climate, rather fertile limestone soil, and progressive farming. Consequently, the bank interest rates are low, the average usual rate is 6.36, and the maximum 6.98. These rates are only a little higher than those in New England and the Middle Atlantic states, and a little less than the rates in the East North Central states. The highest usual and maximum rates are in Alabama, at 8.26 and 9.40 respectively. This is due to the large negro population in this state and the lack of diversified farming. The high rates in Tennessee and Mississippi are accounted for by the same reasons. The bank deposits in these states are small and the bankers have to guard their solvency.

West South Central

This group comprises the sparsely settled agricultural states of the South West. The principal farm products are cotton, live stock, and grain; the farming is done on an extensive scale. The population is very sparse and country banks are few, accommodating large areas of territory with little competition. The farmers invest their income in lands, machinery, and fixed equipment; consequently, the bank deposits are small and very irregular. The entire area of this district is frequently visited by droughts and insect pests.

To purchase supplies, produce and market crops, and place live stock on the ranches, requires large sums of money. In order to supply the needs, the bankers are compelled to call in their deposits with correspondents, borrow from Chicago, St. Louis, and New York banks, and discount commercial and agricultural paper with the Federal Reserve Bank. At best, the loans are very speculative, which fact is ample justification for

high rates required by the bankers to eliminate the most undesirable loans, and protects their depositors. The average usual rate in this district is about $9\frac{1}{2}$ per cent and the maximum rate is above 10 per cent, with the exception of Louisiana, where the usual rate is 8.02 and the maximum, 8.52. Considering the conditions of deposit banking in this district, the rates are not at all too high.

Mountain

The mountain states are sparsely settled and the principal farm products are grain and live stock (sheep and cattle), with some cotton in the southern states. Banks are few and deposits small because the farmers invest their income in fixed capital. The whole district is frequently visited by droughts and the northern half is subject to early frosts, which injure the crops. Consequently, interest rates are higher here than in any of the other geographical districts. Colorado has the lowest rates, with an average usual of 8.95, and an average maximum of 9.75. The highest rates are in New Mexico, with an average usual of 10.22 and an average maximum of 11.25.

Upon investigation, Colorado is found to have 141 national banks in 1920 and New Mexico 47.¹ As local banks are unable to meet the needs, they necessarily must borrow from correspondents and rediscount paper with the Federal Reserve Banks; consequently, they are compelled to charge very high rates to protect their depositors and guard against unsatisfactory loans. The difference between the usual and maximum average rates varies from $\frac{1}{2}$ to 1 per cent. This margin discriminates but slightly between conservative and risky loans.

Pacific

The interest rates of the Pacific states compare favorably with those of the West North Central. Climatic conditions here are excellent, and soil is fertile, favoring diversified and progressive farming. The chief products are citrus fruits, apples, peaches, prunes, raisins, nuts, live stock, dairy products, and grain. Farming enterprises are successful and the products are of superior quality.

¹ Annual Report of the Comptroller of the Currency, 1920.

The savings and bank deposits are rather large. However, the number of banks in Washington and Oregon are not numerous, but California is well supplied. The interest rates are lowest in California, the average usual rate being 7.41 and the average maximum, 8.11 per cent. The rates are highest in Washington, the average usual being 8.47 and the average maximum, 9.32. As the population and number of banks increase in these states, the interest rates will decline.

It is unfortunate that similar data under the national banking system are not available to compare with these rates under the Federal Reserve System. But no such data can be obtained; consequently, this analysis has been limited to the agricultural and economic conditions in the several districts.

The three rates reported merely illustrate the difference between the rates on loans to reliable and dubious customers, and somewhat speculative loans, or loans to individuals who, for one reason or another, are less desirable. These different rates are entirely justified and are sound business practices. Any lender must, necessarily, scrutinize carefully each applicant, and distinguish closely between the shades of difference in the quality of security.

CHAPTER XIX

HOW THE FARMER AND COUNTRY BANKER PROCEED TO USE THE FACILITIES OFFERED BY THE FEDERAL RESERVE SYSTEM

The individual farmer's bank credit is a problem to be settled between the farmer and his local banker. The Federal Reserve Bank has no contact with the farmer's credit until the notes, drafts and bills are presented for rediscount. This does not mean that the Federal Reserve Banks are not interested in the financial welfare of the farmers of their district. Each Reserve Bank is vitally interested in the financial and economic conditions of its entire district of which agriculture is a vital part. But the farmer's paper like that of any other borrower must go through the proper channels. The Reserve Bank deals with its member banks which include all national banks and many state banks and trust companies. If the farmer needs credit for carrying on his business, i.e., the purchase of supplies, live stock, feed, or any one of the numerous operations incidental to the production and marketing of farm products, he must arrange for that credit with his banker.

The banker must know the farmer's circumstances and general credit conditions. The farmer must furnish the banker with this information. Such a credit statement¹ should include an appraisal of the farmer's property, both real and personal; a record of his prosperity and business operations. The farmer can add a great deal to the valuation of his farm and to the good opinion in which he is held as a farmer, by improved business methods and by keeping accounts and records. The farmer who has his business properly in hand will be able to furnish the banker: (1) a copy of the original deed for his farm, the book page of the record in the clerk's office; if there has been a survey, a copy of the blueprint, or a sketch map; (2) other information about the farm as insured and uninsured improve-

¹ See Appendix G for Statement of Farmers' Resources and Liabilities.

ments, timber, orchards, buildings, drainage, fences, water supply for house, barns, pastures, the dimensions of farm buildings, capacity, age, condition, insurance; (3) the equipment and machinery, as plows, harrows, tractors, reapers, binders, wagons, mowing machines, small tools, milk cans, teams, miscellaneous; (4) live stock in detail, the quantity and selling price of farm products sold annually; (5) the acreage of crops the preceding year and total of all crops; (6) receipts and disbursements annually; (7) the present bills payable and receivable; and (8) the purpose for which the new credit is to be used.

The farmer who possesses business initiative and is inspired with an ardent desire to secure the best his business affords can make his credit standing at the local bank just as large as his business and circumstances will permit. But the farmer who wishes to enjoy the full measure of bank credit within his reach must conform to the requirements and practices of commercial banking. He must renew his notes and pay his debts when due just as promptly as he milks the cows.

If the borrowing farmer does not own land, and perhaps half of the farmers in the great farming area of the United States do not, the banker will want to be thoroughly informed of his farming practices and in almost all cases will require the indorsement of his landlord.

The financial statement of the farmer is absolutely essential to the banker. In the first place it is necessary for him to know the farmer's situation in order that he may be of the most financial assistance possible and advise intelligently.

Again it is absolutely essential for him to have a statement of the farmer's conditions because the regulations of the Federal Reserve Board allow the Reserve Banks to rediscount paper for member banks only when accompanied by a financial statement from the borrower.

A representative bank note used by farmers is shown on the next page.

The banker will furnish his customers these notes. If the banker wishes to rediscount the farmer's note at the Federal Reserve Bank the note must meet the requirements prescribed for such paper. The banker must sign the note and become liable for its collection. If the note has a maturity of more

than 90 days but not more than six months the proceeds must be used for agricultural purposes and evidence to this effect must be furnished or the note is not eligible for rediscount as agricultural paper. A distinction is made between agricultural and live stock paper, but both are eligible for rediscount at the Federal Reserve Banks when the maturity is not in excess of 6 months.

Loans on Live Stock

The practice of making loans on live stock is highly specialized. The loans are usually made through local banks and accepted by the city bank for rediscount on the endorsement of the local bank or under the guarantee of its directors. Costs of inspection and the like make it prohibitive for the city banks to make such loans direct.

The applicant for such a loan will first fill out an application blank and a financial statement furnished by the lending banker. If the negotiations are satisfactory the local banker may or may not require a chattel mortgage upon the live stock to secure the borrower's note. The Federal Reserve Banks do not require a chattel mortgage to rediscount live stock paper. Whether or not a chattel mortgage is necessary will be decided by the local banker. In rediscounting cattle paper with a city bank the local bank may be required to furnish a trust agreement certifying to the chattel mortgages held for the legal owner of the notes secured by them. Frequent inspections of the cattle herds may be made by the lending bank's agents, and reports of conditions filed with the lending bank.

How the Marketing of Wheat has been Financed

The individual grain farmer's case is quickly considered. He has not been financed on the security of his grain. What credit he has enjoyed has been based upon his personal note accepted because of his reputation and general credit standing. At many times this has been very inadequate, but it is all the isolated farmer can hope for from commercial banks.

The financing of grain elevators in their marketing operations is a more fertile topic. The Federal Trade Commission found in its report on the grain trade in 1920 that the two principal

sources of finance of the different types of country elevators were as follows:

TABLE XIV.—THE TWO PRINCIPAL SOURCES OF FINANCE BY TYPES OF COUNTRY ELEVATORS AND THE PER CENT OF THE TOTAL REPRESENTED BY EACH SOURCE

	<i>Line</i>				<i>Individual</i>			
	<i>Com- mer- cial</i>	<i>Co- opera- tive</i>	<i>Mill</i>	<i>Malt- ster</i>	<i>Co- opera- tive</i>	<i>In- depen- dent</i>	<i>Mill</i>	<i>Malt- ster</i>
Head office	82.40	52.38	75.86	91.67				
Local banks	9.68	34.92	12.41	8.33	55.88	70.36	70.06	40
Commission houses					26.64	12.88		
City banks							7.63	40

Other sources of finance were the farmers, local residents, stock holders, terminal grain elevators other than commission houses, mills, and miscellaneous credit. But the two principal sources given for each type of elevator show the relative importance of the different sources of finance by different types of elevators. The local bank is the principal source of finance for the individual elevators, and the head office for the line elevators. It should be unnecessary to add that the principal source of finance for the head office is the large city banks.

The importance of the local banks as sources of finance for country elevators by states throws more light upon the reasons for these conditions. The local banks were 70.85 per cent of the total sources of finance in Ohio; Missouri, 64.33; Indiana, 64.59; Iowa, 61.73; Kansas, 60.09; and Illinois, 58.46; while in Montana the local banks were reported as only 10 per cent of the sources of finance, North Dakota, 10.56; South Dakota, 21.96, and Minnesota, 23. The reasons for these differences are not difficult for the student of finance to explain. In the first group of states the local banks are more able to finance the elevators because their deposits are much larger, while the banks in the latter group of states, or the North West, have small deposits and are simply unable to provide the credit needed by the local elevators. Also the line elevators have their stronghold in the North West while in the middlewestern states the independent

elevators are in the majority. Notwithstanding evidences of other unjust treatment, country elevators have been furnished a financial service by commission men and terminal elevators which they could not possibly have obtained otherwise, and which they have not adequately appreciated. Also the commission men and terminal elevators are able to insist upon a rigid policy of protection; such as accurate reports, insurance, hedging, and the like, which local elevators will not submit to for local bankers.

Extent of Borrowing by Country Elevators

That borrowing is almost a universal characteristic of country elevators is shown by the following table:

TABLE XV.—NUMBER OF ELEVATORS INTERVIEWED, NUMBER BORROWING FUNDS, AND THE MAXIMUM AMOUNT PER ELEVATOR, BY THE FEDERAL TRADE COMMISSION, 1916-1917

<i>State</i>	<i>No. of Elevators Interviewed</i>	<i>Number Borrowing</i>	<i>Maximum Amt. Borrowed</i>
Minnesota	191	191	\$10,582
Iowa	206	205	11,402
South Dakota	134	134	14,041
Ohio	93	92	14,801
Illinois	194	194	17,029
Wisconsin	47	47	17,553
Michigan	71	71	17,577
Oklahoma	26	26	17,773
North Dakota	164	164	18,330
Kansas	196	196	19,060
Indiana	97	97	20,034
Nebraska	121	120	23,631
Missouri	65	65	30,632
Montana	34	33	40,828

This table is conclusive evidence that almost all elevators rely upon borrowed capital. Furthermore, if farmers dispose of the marketable portion of their grain as early as convenient after harvesting, a large portion of these loans must be extended for more than 90 days; because at least 9 months pass from the time the last wheat is harvested until the mills take over their last installment for the year's production, and fully this length of time elapses before any of the new crop is in sight. Obviously this matter is handled by the juggling of time on notes. "In substance" one note is virtually destroyed at the end of 90 days and another given.

How the Marketing of Cotton has been Financed

The cotton farmer has been less adequately supplied with credit than the grain farmer. In fact, before the licensed public warehouse and the coöperative association he had no alternative; the only way to get funds upon his crop was to sell direct, and this he was often compelled to do to pay the costs of production.

Through the influence of the United States Bureau of Markets in 1918 and 1919, almost all of the underwriters and protective associations concerned with cotton in Federal licensed warehouses approved a credit of 25 per cent on the final schedule rates for cotton in United States licensed warehouses. The co-operative associations have been able to do even better than this. However, 25 per cent was sufficient credit in 1919. In fact it was exceedingly liberal considering the high price of cotton at that time and the unprecedented drop which followed leaving a large supply of the high priced cotton in warehouses. In normal times, however, when the price of cotton fluctuates between 6 and 10 cents, it seems that a credit of 40 or even 50 per cent would be within a reasonably safe margin.

At the time of the discussion in the House of Representatives of the bill which later became the United States Warehouse Act, the Honorable W. P. G. Harding, Governor of the Federal Reserve Board, stated in part, in a letter to Mr. Lever, Chairman of the Committee on Agriculture, the following:

"The proposed Federal Warehouse Act will, in my opinion, tend to make cotton stored at interior points available as collateral for loans without the intermediation of local banks and will broaden very materially the market for loans secured by warehouse receipts for cotton. The consumption of a cotton crop is a process which is going on through all of the 12 months of the year, but the marketing of the crop, as far as the producer is concerned, is, generally speaking, a matter that involves only 3 or 4 months. The result has been that a mass of cotton comes on the market within a short period when prices are depressed under the weight of the offerings, so that the producer does not get the benefit of the average price covering the full 12 months' period. Proper warehouse laws and adequate warehouse facilities will invite abundant offerings of money to be loaned on cotton and will enable producers to become a factor in determining the price

of cotton and to exercise some discretion in selling. Should the bill become a law, warehousemen will not be compelled to take a Federal license, but can use their own judgment, and there will be ample opportunity to test its practical workings without hardship to anyone. In my opinion, warehouses having a Federal license will do more business throughout the year than will the non-licensed warehouses, and I think the result will be that in the long run practically all warehousemen will comply with the requirements of the Act in order to share in its benefits."

This statement vigorously indicates the possibilities of improving the financing of the marketing of cotton, the control of which lies almost entirely in the hands of the farmers and depends largely upon their ability to coöperate and build up facilities and a reputation which will respect sound banking.

How the Marketing of Tobacco has been Financed

The tobacco farmer, like the cotton farmer, has generally had little accommodation in the way of commercial credit. However, this differs in different districts and with the character of the tobacco produced. About 75 per cent of the sun-grown tobacco of Connecticut is produced on contract to grow a number of acres of a specific kind of tobacco to be delivered at a specified price in good marketable condition, or while the crop is growing in July or August it is sold at a fixed price per pound under specific conditions. A small payment is made upon the crop when the contract is made. Not more than 10 per cent of the Pennsylvania crop is sold in this way. The Ohio crop is almost all sold in December and January and delivered in March. But the larger part of the country's tobacco crop is sold by the "loose leaf auction system" at sales warehouses. This method of sale is employed especially in Virginia, North and South Carolina, and Kentucky. In Lexington, Kentucky, there were 13 such warehouses doing business in 1919-1920. The tobacco is graded and tied by farmers and then placed in baskets holding from 50 to 250 pounds. These baskets are auctioned off at the sales warehouses, both the buyer and the seller having a certain time within which to reject the bid or purchase. In Tennessee 50 to 70 per cent of the crop is sold at the barn door to speculators and dealers. The method of pooling the crop and selling direct to the trade has almost eliminated the country buyers, especially

in eastern districts. The methods of disposing of the tobacco crop differ in each district; however, producers are selling tobacco every month in the year. In 1920-1921 the three months of heaviest sales by producers in the order of their importance in leading states were as follows:

Virginia dark-belt, March, February, and January; Kentucky dark, February, March, and April; bright-belt Virginia, November, February, and October; North Carolina, October, November, and February; South Carolina, August, July, and September; and the Burley belt of Kentucky, February, January, and March. To supplement this information the Bureau of Internal Revenue furnishes the following valuable statistics of quarterly sales by farmers:

TABLE XVI.—QUARTERLY SALES OF TOBACCO BY FARMERS

	<i>Quarter ending</i>			
	<i>Sept. 30, 1918 Pounds</i>	<i>Dec. 31, 1918 Pounds</i>	<i>Mar. 31, 1919 Pounds</i>	<i>June 30, 1919 Pounds</i>
<i>Total, United States</i>	246,625,147	325,512,860	736,653,380	132,187,962
Massachusetts	1,089,377	6,913,753	15,004,658	6,953,506
Connecticut	7,923	1,393,498	2,472,376	621,206
Pennsylvania	1,687,881	719,201	28,699,138	29,182,543
Ohio	1,354,404	2,142,377	16,132,158	17,157,933
Wisconsin	115,205	1,317,982	39,388,205	17,657,488
Virginia	16,042,943	75,579,141	72,657,598	4,001,074
North Carolina	102,283,634	159,944,215	44,070,163	502,906
South Carolina	71,246,362	13,890		107,355
Kentucky	13,999,115	56,908,820	417,104,551	30,596,354
Tennessee	18,363,889	5,076,959	57,287,891	12,827,036

These figures show that the quarter ending March 31 witnesses the heaviest movement of the tobacco crop from the producers to the trade.

It is not possible to separate the financing of the marketing from the production of the crop on the farmer's side. In fact a large portion of the crop is produced on credit and with the exception of years of high prices such as 1918-1919, the production credit is very nearly the value of the crop. This leaves the farmer no alternative. He must sell the crop in order to pay for the production of it. In fact he has nothing as a basis for

market credit. Consequently the financing of the marketing resolves itself into a problem of financing middlemen.

The small dealers and local warehouse men secure their market credit from local banks; and the larger dealers, manufacturers, exporters, or speculators are financed by houses who have established lines of credit with the large city banks. Inasmuch as a large per cent of the tobacco growers have no basis for marketing credit it is obvious that the first step in improving the financing of marketing is that of improving the grower's circumstances and thereby his market credit ability. The chief indictment brought against the present system by producers is that of "a combination between the banking, warehousing, and merchandising interests." As a consequence many efforts have been and are being made to improve the marketing system. The chief point in all the plans is that of organized control in the rate of marketing the crop through growers' associations. It is hoped that these associations will be able to procure adequate funds to enable them to hold tobacco until it can be marketed in an orderly way. It seems that this plan ought to meet with a measure of success as the tobacco crop is now in the process of being marketed every month of the year, and no crop is consumed more regularly.

A recent ruling of the Federal Reserve Board cited in Chapter X should prove helpful not only to associations of tobacco growers but to all farmers' coöperative associations marketing staple farm products. The Board recently considered the question of whether certain drafts drawn upon and accepted by a tobacco growers' coöperative association should be classed as agricultural paper eligible for rediscount at Federal Reserve Banks with a maturity up to six months. The Board had previously considered the case of drafts drawn upon and accepted by marketing associations in similar transactions, however, and after further consideration of the tobacco case, the Board ruled "that in its opinion drafts with maturities not in excess of 6 months, drawn by growers, accepted by tobacco growers' coöperative marketing associations, and discounted by the growers with their endorsement, in accordance with the statement of facts herein contained, would be technically eligible for rediscount at Federal Reserve Banks as agricultural paper when of-

ferred by member banks, provided that the growers use the proceeds of the drafts for agricultural purposes, and provided also, that the drafts comply in other respects with the requirements of the law and the Board's regulations." In brief the reason for this ruling was held to be that the grower assumes all the risks attendant upon further sale and by accepting the grower's draft the association has only loaned its credit to the grower. However, this ruling applies equally to all growers' coöperative associations and if properly handled should prove very helpful in furthering the financing of the marketing of staple crops through farmers' coöperative organizations.

Credit Rating the Farmer

The Connecting Link of Agriculture, Commerce, and Industry.—Farmers need a business credit rating. A simple system for credit rating farmers is demanded at this stage of development in commercial agriculture. Other business men, such as merchants and manufacturers, have their credit rating in Dun and Bradstreet. It will be the purpose of the following to show the need of a credit rating for farmers; to make suggestions for an organization to credit rate farmers; to point out some of the benefits to be derived, and some of the criticisms to be faced.

The Need of a Credit Rating for Farmers.—It would be superfluous to go into detail explaining the need of a credit rating of the American farmers. The need for the credit rating of men who are parties in business transactions has been well proved by the tested benefits of Dun and Bradstreet's credit-rating agencies, and the work of the National Association of Credit Men. That the average farmer does not get ample credit for carrying on the productive operations of his trade is common knowledge to any student of finance and agriculture. The evidence that agriculture is held in check for want of legitimate credit is the growing requests for both long and short-term credit by farmers, the limited amount of credit working in this field, and the abundance of safe security which farmers can offer for credit.

But why is credit not granted to farmers as freely as to other entrepreneurs? There are many answers given to this question. Among the well-advertised answers are: "the slow turnover in capital invested in farm operations," "failure in promptness on

the part of the farmer," "uncertainty of farm operations," and so-forth. All these objections to allowing the credit stream to flow freely to farmers have their justification. But the chief objection we hear little about. That objection is: we do not know, in an accurate and definite business way, anything about this man called a "farmer," what sort of a man he is, what he is worth as a credit risk, where his book accounts and the records of his operations are, where his profit and loss statement is and his balance sheet.

These are the acute reasons why farmers have difficulty in securing adequate credit. What merchant without any business records to show could get credit? Certainly very few could. Then has the farmer really been treated unfairly in the matter of credit? I think, according to commercial requirements, he has received a square deal considering customary business transactions in credit. Those farmers who have been able to show beyond doubt their credit ability have generally found adequate credit accommodations. In fact, many instances can be cited where farmers have been accommodated too freely and as a result business losses among farmers are common. For these reasons other farmers have been discriminated against who were deserving of credit. But if they had been able to show records and accounts substantiating their credit ability they would have been served with the proper credit.

An Organization for Credit Rating Farmers.—An organization similar to the present farm bureau organization would be adequate for credit rating farmers. Such an organization could be a part of the farm bureau plan, and if not a part of the farm bureau organization they should be co-workers. The credit rating operations strike so parallel with farm bureau work that it might seem to be a part of the farm bureau manager's business. But most farm bureau men are not prepared to do this sort of economic work, and even if the farm bureau men could handle it, the task would be entirely too much to add to the present endless duties of a farm bureau manager.

A local bureau by itself or acting independently would be too much of a restriction for the farmers it served. Farmers' business transactions are by no means confined to their own county or even their own state. Then obviously there should be a cen-

tral state bureau to direct the work of all the local credit bureaus uniformly on the same broad general principles, leaving room, of course, for local initiative. This central bureau of the state could be a part of the extension department of the State College of Agriculture in conjunction with the Economic Department. Then, like the farm bureau organization, there could be a national office at Washington. The chief duty of this office would be to supervise the credit rating service throughout the country. Of course details would be left for the adjustment of each state or community according to its needs. This central organization would be necessary in order to standardize the work so that the reports of a bureau in New York would be perfectly understandable to a man in Texas who had familiarized himself with the plan anywhere.

Work of the Organization.—The first duty of the local bureau would be to install a system of records and accounting for farmers who are interested. This would be done upon the payment of a nominal fee and membership dues. These records and accounts can be made so simple and plain that any farmer who can read and write will have no difficulty in filling them out. For each applicant an inventory would be made and a classification of the accounts for bookkeeping and record purposes. Along with these primary accounting essentials the credit manager would investigate the validity of each applicant's report, and with the inventory prepare a debit and credit statement with a balance sheet showing the farmer's financial and business standing. Duplicate copies of all these should be left with the farmer. The farmer would make weekly or bi-weekly reports to the local credit bureau on the changes in his operations. These reports would be made on printed forms supplied by the local bureau. The local bureau would check up the farmer's permanent record with each report. Then monthly a statement would be drawn from the farmer's own records and mailed to him. At the close of the fiscal year a second inventory would be taken, the books closed and a complete analysis made of the farmer's business for the year. A copy of the final report would be mailed to the farmer, a copy retained in the local office, and possibly a copy filed in the central office of the state.

With these records the credit manager could indicate to the

farmer at any time just how he stood in a business way or even as to his profit and loss. Certainly no one could doubt the value of such records to county agents, extension workers, and the farmer himself.

Some of the Benefits to be Derived.—The credit rating plan would enable the farmer to know by actual figures what he is doing financially, his successes, failures, actual worth, and business standing. Besides the immediate benefits to the farmer in knowing these facts and directing his work accordingly, it would enable business men and bankers to know just what the men they are buying from and selling or loaning to are worth as a risk. This in itself would just about solve the farmers' credit problems.

It would teach the farmers how to keep accounts and records, and check up their own business. Farmers will take pains to do this when they are taught that it is to their immediate financial interest to do so.

Farmers want to pay their income taxes. No class of men are more patriotic. But farmers who have not a financial rating and accounting records over a period of years are having no end of trouble in figuring their income taxes. Some will pay more than they should, some less, and many will never know whether or not they owe a tax. The trouble this plan would save the farmers and the additional income secured for the government would, alone, more than pay for credit rating farmers.

The farmer, when borrowing or buying, would be relieved of the present almost insurmountable difficulty of proving his worth as a credit risk by simply referring to his credit rating bureau. If a farmer or organization of farmers desire to make a purchase from a distant company, the company would not need to send their agent and go to unwarranted expense in order to determine the security back of the risk. For only a few cents the company could write, telephone, or telegraph the local credit bureau. For example, suppose the Fertilizer Works of Baltimore has been requested by a farmer or a Farmers' Coöperative Association to ship a carload of acid phosphate to Urbana, Illinois. How does the Fertilizer Works know the security back of this risk? They do not know and must go to considerable expense to find out, and what is worse, all that can be found

out with the present unofficial records of farm business must be a mere estimate based upon a guess. The same credit risk presents itself to the live stock commissioner who would deliver to farmers cattle to feed through the winter; the lumber dealer who would sell the farmer a barn pattern; the implement dealer who would sell the farmer a plow or a tractor; the feed dealer who would sell the farmer feed for his cows, and the banker who would loan the farmer money.

The expenses of bankers and business men as dealers in implements, fertilizers, feeds, lumber, and live stock, in ascertaining the farmer customer's credit ability, would far more than pay the cost of credit rating farmers.

A credit rating would elevate farming to its rightful position relative to commerce and industry by providing equal business facilities.

The records and balance sheets would be suggestive for improvements not only to farmers but to all those who work in the field of agriculture.

Suggestions for state and national policies of agriculture would be indicated on the face of these records.

Criticisms.—Many persons interested in agriculture will say that this would be an endless and expensive task.

The farmer, like all men who aspire to ownership, is in business for profits. A credit rating would improve his prospects materially. The work, if properly managed, could be carried on successfully with an organization not any more complex than that of the farm bureaus. But as long as agriculturists hold back on progressive practices just because they are difficult, just that long agriculture will lag behind.

Another objection which will be registered against a credit rating for farmers is that farmers will not want to make their financial worth a matter of public information. This is obvious. But the farmer is like any other business man. He is willing to make his business known to officials who ought to know and this information would be properly safeguarded and confidential for business transactions just the same as the credit rating of the local merchant, manufacturer, or other business man.

Some will say that character and capacity are the principal security back of credit, and not capital. Certainly these human

elements are the best of security, but most loans of any size are made on the basis of known capital. Nevertheless, the credit rating and records of a farmer over a period of years would indicate the principal facts regarding a farmer's character and capacity as well as his financial ability.

Such a plan, of course, cannot be worked out in a year or even five years. It will take time, patience, leadership, and education.

CHAPTER XX

CRITICISMS OF THE FEDERAL RESERVE SYSTEM IN RELATION TO SHORT-TERM AGRICULTURAL CREDIT

The Federal Reserve System has been the object of criticisms by nearly every one who has been pinched by declining prices. Not all of these criticisms can be considered, but some of the chief points raised in behalf of the farming interests for short-term credit will be analyzed.

I—Do the Banks Monopolize the Deposits and Discriminate Against the Farmers in Behalf of Big Business?

The accusation of monopolizing deposits and discriminating against agricultural and local needs in the interests of speculators, the packers, and middlemen, was proclaimed by F. C. Howe, as follows:

"There are banks enough; every small town has from one to three banks; and they are bulging with deposits. But those deposits are not available for the producing classes. They are used for something else.

"In a generation's time, banking has changed from a local to a national system. It has many qualities of a nation-wide monopoly, and, as a result of the great war, the smallest bank in the country has become a part of an international banking monopoly. It is a sucker, a feeder, a little sponge, that draws to itself the resources of the country, the village or the town, which resources in turn can be used by the big exploiting banks of New York.

"It is the man farthest down who needs credit most; yet the bankers will not supply it. They prefer to send their money to Wall Street; to use it to aid speculators, packers, middlemen, or for other commercial and speculative purposes. America has no banks that help the man without capital, the man with a little capital, or even the farmer in need of credit for productive purposes. . . ."¹

¹ F. C. HOWE in *Farmers' Open Forum*, Jan., 1921.

Any one who is acquainted with the rural credit problems of the United States must take issue with Mr. Howe in these statements.

The South and West do not have banks enough; but do have all that can be maintained. This may seem a contradiction of facts; but the truth is, that the sparse population of the South and West is not adequate to support any more banks than they now have, and because the population is not adequate to support more banks, facilities are not available to accumulate the savings of the existing population, and thereby provide legitimate credit and banking service for sound productive enterprises in the local communities. That the small banks which do exist in these communities "are bulging with deposits" is contrary to the most superficial knowledge of the conditions. Deposits are small and the demands for credit large. The banks of these sections almost always borrow from Eastern correspondents for the production and harvesting of crops.

It is true that banking has been transformed from a system of independent local banks, with as many different kinds of currency, to a national system, with a uniform currency; and this has been a vast improvement. This uniform currency alone justified the national banking system. But now the Federal Reserve System is virtually a nation-wide organization of co-operative commercial banking. The local village bank has the privilege of discounting its prime commercial paper with its Federal Reserve district bank, and thereby obtaining additional currency for its customers when its own deposits are low. The district Federal Reserve Bank in turn may rediscount with another Federal Reserve Bank, if its member banks are especially in need, and it becomes overloaded with discounted commercial paper. This is, undoubtedly, the greatest system of co-operative banking in existence. Admitted that it has monopoly power of the note issue and the like, it is a quasi-government monopoly, and functions for what is deemed to be the benefit of the public. Under this system, the command of funds for productive enterprises and commerce are at the disposal of the local interests in proportion to their respective sound creditability.

Mr. Howe criticizes the loaning of funds to foreign countries in the following words:

"More recently, the money of the farmer and the worker has been shipped abroad. Upwards of \$20,000,000,000 of credits and loans have gone out to Europe, South America, Mexico, and China. The interest rates are high in these countries. In this process, the producing classes in America are starved for credit. We pay higher interest rates. We need the money at home. But it is being used for the exploitation or 'development' of other countries." ²

Mr. Howe does not explain the purposes of these loans, but it scarcely needs mention that almost all of these loans were in connection with the World War. Europe was impoverished, and in need of American products, but had not the means with which to buy. On the other hand, we were over-supplied with gold; and, as a result, our currency was inflated to the point where the dollar was worth only about 45 per cent of its pre-war value. These loans to foreign countries stimulated the demand for American products, and were an inestimable advantage to the farmers and laborers.

II—Is Favoritism Shown New York Banks?

Along with the charges of exploitation by the New York banks by Mr. Howe, the Honorable John M. Baer charges the Federal Reserve System with discrimination in behalf of the New York bankers, as follows:

"When money was very scarce, and distressing conditions existed in the Central States, four banking institutions in New York City were borrowing from the Reserve System an average of over 118 millions each, or practically as much as the Federal Reserve Banks of St. Louis, Kansas City, Minneapolis, Dallas, and Richmond combined, were lending to more than four thousand member banks in twenty-one states in the Union, comprising more than one-half of the entire area of the United States." ³

What were the New York banks doing with these large loans? The accuser assumes that they were employing these loans in speculation. Perhaps a portion of it was so used. But country banks all over the United States borrow large amounts from their

² F. C. HOWE in *Farmers' Open Forum*, Jan., 1921.

³ From resolution of Hon. John M. Baer, in the *Farmers' Open Forum*, Jan., 1921.

correspondents in New York, Chicago, and other financial centers. Doubtless a large portion of these loans traveled this circuitous route, and were used for advancements to country correspondents.

In a Middle Western city, the charge has recently been brought that a single bank in that city had obtained loans from the Federal Reserve Bank aggregating a larger volume than the loans to all the banks in one of the foremost agricultural states. Upon examination, the writer found that the deposits with the Federal Reserve Bank from all the banks of this state were about \$20,000,000, against which loans had been made aggregating nearly \$85,000,000. This is pyramiding the credit of the Federal Reserve Bank beyond the margin of safety. The large city bank, on the other hand, carried a deposit balance with the Federal Reserve Bank of about \$40,000,000, against which it had obtained loans of around \$85,000,000. Was the city bank using this for speculation? Upon inquiry, the writer learned that more than \$55,000,000 of the city bank's loans from the Reserve Bank had been reloaned to country correspondents in the agricultural states. No doubt, the country banks had borrowed up to their maximum allotment with the Reserve Bank, and were now drawing against their deposits with correspondent banks.

III—Are the Farmers Under-financed?

R. C. Milliken, Monetary Statist of the National Society of Record Associations, charged in a letter, May 13, 1921, that the farmers are not adequately financed by the present banking system, and in a letter to the Governor of the Federal Reserve Board, said:

"Under the present system, the farmer loses in more ways than one. First, he has to pay a rate out of proportion to the rate required under a proper system for agricultural production. Second, he cannot always obtain sufficient credit to make himself an economic unit. And, third, the credit institutions which aid him in production, so cripple themselves that they fail to function in the distribution of the products raised by the farmer."

In some parts of the country, the farmer does have to pay an exorbitant rate of interest. But these high rates are due, pri-

marily, to the limited deposits and the large demand for loans. This condition is found especially in the newer sections of the country; as, Montana, Idaho, and Northern Minnesota. It is caused, in a large part, by the farmers investing their income in fixed capital.

Just what Mr. Milliken means by the farmer being unable to obtain credit to make himself an economic unit is not clear. Perhaps he means that the farmer is frequently unable to obtain credit to purchase and equip a farm so that it will earn an income equal to the going rate of interest. This is true. But why should the farmer be furnished this volume of credit any more readily than a man undertaking any other productive enterprise? The farming business, like all undertakings in our society, is competitive, and discrimination should not be shown any specific class.

That the credit institutions tie up their funds in production credit to such an extent that they are unable to finance the farmer's marketing operations is, perhaps, true. But the farmers have never been adequately prepared to undertake marketing on a large scale. If the farmer expects the marketing of his crop to be financed while he does the marketing, he must provide himself with adequate storage, insurance, and marketing facilities. The individual farmer cannot, as a rule, afford to do this, but it is possible with an organized group; and until farmers organize and provide themselves with these safeguards for the financing of crops and marketing facilities, they cannot hope to be catered to with this class of credit.

IV—Do the Federal Reserve Banks Benefit the Farmer?

The complaint that the Federal Reserve Banks do not benefit the farmers was brought by one of the very widely distributed farm papers in the corn-belt, in these words:

"The farmer, up to this time, has not been benefited through the Federal Reserve Bank. The three months' maturities that the Federal Reserve Bank requires is insufficient time for him. The local banks, even if they are member banks, cannot discount the farmers' paper with the Reserve Bank, as it usually is six, nine, or twelve months' paper. The stock broker and Board of Trade operator, who can use short

term loans, is helped out. Why should six months' maturities be taken by the Federal Reserve Bank on export shipments, and not on farmers' paper?

"If the Federal Reserve Banks, instead of holding their vast reserves, would place them at the disposal of the American farmer for his necessities, business in these necessities would be back to normal within a short time. I say necessities, and do not mean automobiles, electric farm lights and hundreds of other articles useful on a farm, but which can be done without for a year or two. The farmer is financially sound. He will pay, and in rediscounting such notes there would be very little credit risk, as such notes would be endorsed by the merchant and the local bank."

It is a matter of chagrin to learn that a paper published in the second largest city in America, with perhaps a half million farmer subscribers, and the principal office of which is only a few blocks from the second largest Federal Reserve Bank in the United States, should be so misinformed, after the Federal Reserve Banks have been rediscounting farmers' notes with six-months' maturity for more than six years, as to state that the Reserve Banks do not rediscount farmers' six-months' paper, but do rediscount six-months' paper for export shipments. A further comment upon these criticisms would be superfluous.

V—Are Insufficient Funds Kept in Local Banks?

"The Government has failed to arrange to keep ample funds in local banks to take care of local needs, and by this neglect, private capital has been able to charge high rates of interest to farmers."

No doubt the deposits in the local banks are too small to care adequately for the local needs in the Western and Southern states; but what concern has the Government with this matter of local banking, as charged? Any local bank that has prime commercial and agricultural paper may rediscount it at the Federal Reserve Bank of its district, and obtain note circulation for its customers. If a community does not have such paper, and is also so thriftless that its savings do not afford an adequate deposit with the Reserve Bank for loans, it does not deserve them. Under the Federal Reserve System, funds can be moved by telegraphic transfers from one district to another, if

the need and security warrant it; but the system is not generous enough to loan the funds of the depositors of one community to the citizens of another community, unless there is ample assurance of prompt and full payment.

Private capital, and particularly local merchants and dealers, have had a regular "orgy" in some communities. Loans are made to farmers for almost any purpose, and on collateral and long-term security such as a commercial system of banking cannot handle. Extortionate interest rates have been exacted, and farmers have been exploited; but this is a matter for local coöperation, and education, along the lines of finance and sound economics, and not a case for Government philanthropy. Every local bank should be a bureau of information on sound economics and finance, and in this respect the Federal Reserve System may have been unable to do their full measure of service up to the present. A larger portion of their surplus earnings used in this way would be a wise expenditure.

VI—Has the Local Banker failed to give the Full Measure of Service which can be Properly Demanded of Him under the Federal Reserve System?

"There are many bankers who see in their calling nothing but a private business to be conducted with one and only one aim, personal profit. They have failed to give the full measure of service which can be properly demanded of them. The banker's relation to the agriculture of his community has been the weak link in his chain of service. There has been a disposition in the past to exercise marked priority in financing the capital needs of merchandising and manufacturing interests, a specialization that has too frequently been carried to the point of overlooking the requirements of the largest rural business of all, that of agriculture."

This criticism assumes that the local banker does not know his own best interest. True, the local banker often lacks adequate economic information, but who doubts the cordiality and service of the local banker to his depositors, or confidential, satisfactory customers? Can the farmers expect to obtain large loans from the local banks at low rates of interest, when they are very small

depositors? This would be discrimination against customers; however, this class does not include all farmers, because some are the local bank's best customers. That the banker should favor the short-term loans to merchants and manufacturers, rather than the longer term loans to farmers, is necessarily inherent in the very nature of commercial banking. Also, the banker prefers the prompt settlements made by the merchant and manufacturer to the dubious habits of many farmers.

VII—Can Crops be Marketed with the Present Credit Facilities?

"Banks now finance the carrying of crops after the producer has parted with them and until the consumer wants them. No greater aggregate volume of credit would be necessary to permit the farmer to carry it rather than the middleman."

"The marketing of staple crops cannot be done with the credit farmers command today. The middleman is able to borrow from the bank at a reasonable interest rate and purchase farm products on a falling market, then hold them until the market rises."

Can any one doubt that wheat is better security for a bank loan in one of Chicago's 6,000,000 bushel elevators, ready for marketing any day, and insured against fire and other losses, than in the farmer's barn, generally uninsured, and unmarketable for some time?

The second criticism is a repetition of the first, from a slightly different point of view. The condition stated contains some truth, but it is not the banker's fault. If the farmers will provide themselves with adequate storage facilities at the markets, and market their crop in an orderly way, paying their bank loans promptly, when due, there seems little doubt that they would be financed as liberally as the middleman. The charge is made that the middleman purchases the crop on a falling market, and then holds it until prices increase; to do this, he is financed by the banks at low interest rates. It is true that the middleman can fill his storage facilities at the terminal markets, when the bulk of the crop is moving from the farms and the supply undoubtedly depresses prices. To carry the crop in stor-

age is expensive, and must be borne by the middleman; but prices are measured against the world supply, and if the price in one country or one market is unduly depressed, buyers will flock to that market and the price will soon respond to the demand and get back in line. However, if the farmers will provide themselves with the same service and equipment, and sell in response to market demands, there can be little doubt that the bankers will welcome their paper.

A similar criticism of the present financing of marketing came from the National Conference of American Cotton Growers, and refers primarily to the marketing of cotton and tobacco. Senator Smith, of South Carolina, said:

"Section 13 of the Federal Reserve Act gives the right to extend accommodations for six months. Six months is not long enough. The farmer has to market his year's crop in sixty to ninety days. He is compelled to sell his product and break his own market. Somebody is carrying the cotton, which is made after it leaves the farmer's hands. His bills come due practically as soon as his crop is made. But who carries the crop from that time until it finally is sold to the consumer? Somebody does it, and, whoever it is, that credit should be used to allow the cotton farmer to have a reasonable period of time in which to market his crop."⁴

In referring to the suggestions of Senator Smith, Senator Heflin said:

"I would like to have this conference petition President Harding to establish a $4\frac{1}{2}$ per cent rediscount rate on cotton paper. I agree heartily with Senator Smith, and there are others of us in the Senate, and many in the House, who have organized and agreed on certain things which must be done for the farmers of the South and West."⁵

The criticisms of the financing of the farmer in the process of holding and marketing his grain with his present facilities and methods also applies to the cotton and tobacco crops.

Suppose the suggestion made by Senator Heflin for a $4\frac{1}{2}$ per cent rediscount rate on cotton paper should be acted upon

⁴ Senator Smith of South Carolina, before the National Conference of the American Cotton Growers, June, 1921.

⁵ Senator Heflin, before the National Conference of the American Cotton Growers, June, 1921.

favorably by President Harding and the Federal Reserve Board. Would not other classes have an equal right to demand concessions and special rates? What would the live stock and tobacco farmer, and the manufacturers of necessary products for which the market is dull, do?

When will we govern our finance and business by the scientific guidance of sound economics, instead of politics?

VIII—Deposit Banking cannot meet the Credit Needs of the Farmer for Production, because of the Length of Time Necessary for the Loan

"It takes twelve months to prepare for, seed, cultivate, and market an ordinary agricultural product. The present lack of a system of marketing forces 75 per cent of the agricultural products upon the market in four months, with the resultant autumnal dip in farm prices. An orderly system of marketing would carry the distribution period over twelve months. This cannot be accomplished under the present credit machinery. Do not forget that the Reserve Act is essentially for commerce and industry and must deal in quick-maturing paper, while the present Farm Loan Act offers for sale paper with a maturity of thirty-four years, or longer. What we want, and must have, is a piece of credit machinery peculiarly adapted to the handling of paper with a maturity which synchronizes with the period of growth and distribution." ⁶

This criticism hits close at the weakness in our financial system. The farmers can avoid the "autumnal dip" in prices by adequately providing themselves with marketing machinery, and doing orderly marketing. That means, of course, that they must measure their supply against the world supply, and not try to create a monopoly and boost prices.

The need for production credit with a longer maturity than is now provided for is obvious. This cannot be handled under either of the banking systems mentioned. The Federal Reserve Banks cannot handle it, because they are a system of commercial banks. Perhaps some plan, such as that of the French *Crédit Foncier*, could be installed in connection with the Federal

⁶ *Orange Judd Farmer*, Dec. 18, 1920,

Reserve System, whereby the farmers' notes, based upon actual production, maturing from six months to three years, can be collected, rated, and classified by the rural member banks and disposed of in an open discount market for this class of investments.

It is also charged that deposit banking does not meet the needs of cattle raising, as follows:

"Deposit banking does not meet the needs of cattle raising. This credit takes twenty-one to thirty months to reproduce itself. Deposit bankers cannot tie up their borrowed money for that length of time, because they cannot meet the demands of their creditors (depositors), with such assets. They cannot meet the demands of their creditors and producers, too, however much they may desire to do so. Especially is this true under abnormal conditions, when people go on a wild spending rampage. The bankers should not be blamed. It is the weakness of the system."⁷

This criticism is true. Cattle loans for more than six months do not fit into deposit banking. Consequently, a vast system of cattle loan banking has grown up in this country sponsored as private enterprises and by middlemen. The best method of handling cattle paper would be by some such system as that suggested for farmers' obligations, based upon productive enterprises maturing between six months and three years. The question might be raised as to what class of investors would purchase this class of paper? Who buys it in France? Such paper, properly handled, would be as attractive an investment as any other short-term security, and short-term investors are numerous.

IX—Fixed Interest Rates for Local Banks

In an address to the Peoples' Construction League, at Washington, April 15, 1921, Ex-Comptroller of the Currency, the Hon. John Skelton Williams, stated that "an interest rate reasonably maximum should be provided for bank members of the Federal Reserve System." Mr. Williams charged, further, that "excessive and burdensome interest rates had been imposed upon many banks in the West and South. The rate charged at one

⁷ *Orange Judd Farmer*, Dec. 18, 1920.

time by a Federal Reserve Bank under regulations approved by the Federal Reserve Board, in an exceptional case, to a small bank in a farming section, amounted to more than 80 per cent per annum."

If the maximum rate of interest which the local banks can charge customers is fixed, how can the bank protect its deposits and effectively regulate the demand for currency according to the local supply? How will the bank be compensated for the risk of hazardous loans to farmers in the drought stricken areas, and the like? Mr. Williams' accusation of high interest rates charged western and southern member banks will not stand the test of facts. Up until June, in 1920, the discount rate on agricultural and live stock paper maturing after 90 days did not exceed 6 per cent at any Federal Reserve Bank. In June, the Boston, New York, Chicago, and Minneapolis banks advanced the rates on this class and commercial paper, maturing within 90 days, to 7 per cent, and in November the Atlanta bank advanced its rate to 7 per cent on both classes of paper. At all other Federal Reserve Banks, the rates on both classes of paper remained flat at 6 per cent, through the year. When commercial paper maturing within 90 days is discounted at the same rate with agricultural and live stock paper, with 180 days' maturity, there is certainly no discrimination against agriculture; consequently, Mr. Williams' accusation of the 80 per cent loan to a country bank approved by the Federal Reserve Board is open to grave doubt.

X—Was the Federal Reserve Board's Policy Responsible for the Decline in Prices of Farm Products?

About the middle of October, 1920, the farmers' representatives appeared before the Federal Reserve Board and accused the Board of being responsible for the decline in the prices of agricultural products by the following official acts:

1. Restriction of credits.
2. Raising the rediscount rate on paper secured by farm products.
3. Discontinuance of the War Finance Corporation.
4. The statements given out by the Secretary of the Treasury, the Governor of the Federal Reserve Board, and the Federal

Reserve banks, which have been construed to the effect that commodity prices, particularly prices of farm products, are too high and that a pre-war basis, or an approximation of a pre-war basis, must be reached within a short time.⁸

In other words, the farmers ask, irrespective of the banking situation, that ample credit be supplied for the holding of crops until prices are restored to a profitable basis.

The farmers stood the brunt of the price deflation and did not obtain the high prices of other entrepreneurs during the period of inflation, and they have just cause for feeling that they have been discriminated against. But the condition brought on by the decline of prices was not due to the acts of the Federal Reserve Board as alleged, but by the irresistible change in the world's economic conditions after the close of the war, and the consequential change in the tide of economic affairs in this country.

XI—The Relation of the Federal Reserve System to Agriculture

The Federal Reserve System has no more direct relation to agriculture than any other industrial pursuit. It is a system of bankers' banks, and each Reserve Bank is directly concerned only with its members. Each bank affords, without discrimination, the same service to all its members. The member banks in the rural districts are, of course, vitally concerned with agriculture; but these are the problems of the country bankers, and not of the Federal Reserve Bank. Then, the question might be asked, what are the problems of a Federal Reserve Bank located in an agricultural district? Its problems are the same as those of a Reserve Bank in a non-agricultural district,—that is, to be banker for its member banks. But the problems of the Reserve Bank must be modified by the problems of its members. The Reserve Bank in an agricultural district, which discounts large volumes of paper maturing after 90 days and in small denominations, cannot do as large a business with the same amount of assets as the Reserve Bank which turns large volumes of short-term merchants' bills maturing within 30 days; because the longer term of farmers' paper dries up the liquidity of the

⁸ *The Economic World*, October 16, 1920, p. 544.

credit, and the volume of small items are expensive to handle.

The Federal Reserve System's policy is national. It should discriminate against none and favor none. It does, however, favor agriculture and foreign trade, by rediscounting their bills with six months' maturity, and these businesses should expect to pay higher rates for these favors.

XII—The Country Banker's Position in the Federal Reserve System

The country banker stands between the farmer and the Federal Reserve Bank, and is, therefore, the link in the system between the agricultural classes and the Federal Reserve Banks. It is the duty of the country banks to credit-rate the farmer, and pass judgment upon the success of the productive enterprises for the purposes of which the farmer asks for bank credit. When the local bank has loaned up to near the limit of its ability, which is determined by its liquid assets and deposits, it may wish to avail itself of the privilege of rediscounting some of its agricultural paper maturing within six months, with the Federal Reserve Bank. It can do this in proportion to its credit ability with the Reserve Bank and obtain notes for further loans. Then, why should farmers ever want for additional credit facilities if they have a first class local bank? The ability of the local bank is definitely limited by the deposits of its customers, and it cannot extend credit too lavishly on six months' notes, because it must be able to pay its depositors upon demand.

The farmer complains that he is not served with sufficient credit either in volume or length of term, which is often true, from the standpoint of the farmer, and for the best success in his business. But he should be educated to the fact that the ability of a commercial bank to serve his needs is definitely limited. This economic education is a duty of the Federal Reserve System, and the farmers' advisors.

CHAPTER XXI

CONCLUSIONS

1. The farmer's many needs for short-term credit maturing within six months are frequently not appreciated by local bankers. However, the drafters of the Federal Reserve Law and the directing Board have made liberal provisions for almost all the demands for short-term credit by farmers. But both the country bankers and the farmers have yet to be educated to the wise and just apportionment of the credit at their disposal.

2. The farmer requires credit for fixed improvements with a maturity that is too long for commercial banks and too short and varied in character for investment banking. The United States needs additional banking facilities or a reorganization of the scope of the present facilities, in order to take care of these requirements. The War Finance Corporation Act of 1921 provided \$1,000,000,000 credit for the production and marketing of farm products. It is designed to meet the demands of agriculture for credit for periods of more than six months and less than three years; and is good as far as it goes. However, for many people it bears the badge of a Government organization, and is only temporarily effective, and far too narrow in scope. Some permanent system is needed for collecting, standardizing and grading the farmer's paper offered against fixed improvements and placing it upon the investment market on the basis of its merit.

3. The national banking system expanded primarily to meet the needs of commerce when the credit needs of agriculture were of small consequence. As the country developed, the credit needs of agriculture grew more imperative. Many legislative attempts were made to correct the inequalities of the national banking system, but they were of only temporary consequence.

4. The increase in the number of banks, volume of loans, discounts, capital, and circulation, from 1900 to 1914, was due to the elimination of legal restrictions, and this was a period of

general prosperity throughout the country. It is to be observed that the growth was much more pronounced in the agricultural states than in the non-agricultural districts.

5. There appears to be a remarkably close correlation between the value of all farm property and the banking assets; but the evidence is not adequate, and so it may be just a coincidence at this particular period in the development of the country.

6. Subsequent to the reduction of the capital requirements for organizing a national bank, the growth of the national banks was surprisingly rapid in the agricultural communities, particularly in the Western and Southern states. This is adequate evidence that the need for banking facilities had long been felt in these communities, but the savings were not sufficiently large to support banks under the high capital requirements which had previously existed in the rural districts. Also, the rural population were unable to use deposit currency freely for lack of facilities and confidence. The country people were distrustful of checks; therefore, farmers paid cash for purchases, and consequently demanded it for what they sold. The cash requirements for moving the crops and the unequal distribution of the bank notes according to the country's needs caused a severe strain upon the credit structure of the country during the crop-moving season. The interior development was held in check by these unsatisfactory credit conditions and as a result the whole country suffered a loss.

7. The National Monetary Commission found the national banking system too inadequate to serve agriculture with the short-term credit needed. Almost all the Commission's criticisms of the national banking system had a direct bearing upon the agricultural credit situation. These were later effectively remedied in the Federal Reserve Act.

8. The legal restrictions upon the organization of national banks made their development in the rural districts impossible. The requirements of capital and population disqualified the rural districts for national banks, and the limitation on branches prevented city banks reaching out.

9. Call loan interest rates on the New York Stock Exchange reflect the immediate conditions of supply and demand in the

money market more accurately than any other available criteria. However, the rates are more quickly influenced by financial conditions than by agricultural conditions. Almost all of the wide fluctuations in rates have been due to conditions in the business world far removed from agriculture.

10. Under the national banking system domestic exchange was very cumbersome; money did not move freely from one section of the country to another for seasonal purposes; but moved only after a forceful strain had been exerted by urgent demands and high interest rates in the agricultural districts. The seasonal movements of cash between the principal cities of the geographical districts correspond with movements between the districts themselves, except that movements to and from the cities are smaller than the movements to and from the whole district. However, large amounts of cash generally are sent to the large city banks first and then are apportioned out to country correspondents. The movements of cash between different sections of the country correspond with the seasonal demands of business and agriculture. But the system of transferring funds by mail was cumbersome, expensive, hazardous, and extremely unsatisfactory.

11. Special provisions for short-term agricultural credit were inserted in the Federal Reserve Act to fulfill political promises, meet the public sentiment demands and induce country banks to join the system.

12. Even without the special provisions, the Federal Reserve System is a vast improvement over the national banking system, in meeting the short-term credit needs of agriculture.

13. Not all legitimate short-term credit needs of agriculture were met under the national banking system, nor are they under the Federal Reserve. Some are too speculative for commercial banks, but more are for too long a term or the local banks are just simply unable to take care of them.

14. The provisions for short-term agricultural credit under the Federal Reserve System are about all that can possibly be expected of commercial banking.

15. The rediscounts of farmer's paper with six months' maturity by the Federal Reserve Banks during 1919 and 1920 were too large for the best functioning of the banking system.

16. Six months is too short a term for many of the farmers' productive operations, but the Federal Reserve Banks cannot invest their demand deposits in longer term paper.

17. The seasonal movements of credit and currency between New York and other parts of the country are facilitated by the wire transfers through the Gold Settlement Fund and the daily clearance systems maintained by the Board for the twelve Reserve Banks, and by each bank for its members, which is an inestimable improvement over the transfers through shipments by mail under the national banking system.

18. The seasonal transfers between the Federal Reserve Banks correspond to the seasonal movements of currency between the geographical divisions under the national banking system. Under the national banking system, currency moved slowly, sometimes requiring several days, and exchange rates were registered between the points of shipments and receipts. But under the coöperative system of the Federal Reserve Banks, exchange rates are wiped out and transfers of balances between the banks are made daily, and seasonal transfers are made almost without the loss of time when the demand is felt.

19. The rediscount rates on farmers' paper are reasonably low, and there is no discrimination against this class of paper. The farmers' paper maturing under 90 days bears the same rate as commercial paper, with that maturity. In most of the Reserve Banks, the farmers are charged from $\frac{1}{2}$ to 1 per cent higher rate on their special privileged paper maturing after 90 days, and it is just that they should pay for this favor. However, in some of the western Federal Reserve Banks, the rates for farmers' paper maturing after 90 days are the same as the rates for commercial paper, maturing 61 to 90 days.

20. The low rediscount rates for farmers' paper at the Federal Reserve Banks have not all been passed on to the farmers by lower interest rates at the local banks. When the Reserve Banks have been charging 4 and $4\frac{1}{2}$ per cent rediscount on agricultural paper maturing within 90 days, and 5 and 6 per cent on the paper maturing after 90 days, the country banks in the West and South have been charging the farmers from 8 to 12 per cent on all loans, without regard to maturity.

In many cases, the local banks are justified in charging these

rates, due to the scarcity of deposits and the speculative character of the loans.

21. Rediscount rates are relatively uniform throughout the country, and effectively under the control of the Federal Reserve Board and the district banks. Any uniformity of rates was impossible under the national banking system. Uniformity of interest rates to borrowers is equally impossible under the Federal Reserve System.

22. Many country bankers could obtain lower rediscount rates for themselves if they banked directly through the Federal Reserve Bank instead of through city correspondents. The city correspondent must have a middleman's profit on the funds he borrows from the Reserve Bank and loans to the country bank.

23. The absence of coöperation between the banks which existed under the national system is corrected almost to the extreme under the Reserve system. Funds move freely from districts where they are relatively redundant, to districts in need. In fact, the element of competition has been lost, the effects of which, if so handled, could prove equally as detrimental to the agricultural districts as the lack of coöperation. But there is no doubt that this problem will be handled discreetly by the Federal Reserve Board.

24. Under the Federal Reserve System, transfers of funds from districts where they are relatively redundant to districts where needed, and the rediscounting of paper, has effectively remedied the helplessness of the individual bank in times of crises. The individual bank is now a member of a large co-operative system and should be able to obtain ample assistance.

25. The Federal Reserve System has been unjustly criticized by farm papers and persons who are not informed of its functions and practical working. Also, it has been unjustly criticized by well-informed persons, due to prejudice and the desire for political recognition.

26. The Research Department of the Federal Reserve Board should be maintained at Washington, where the influence of New York's special financial problems would not be the dominating influence in the policies, but the interior problems of finance in agriculture and domestic commerce would be more thoroughly considered.

27. Each Federal Reserve Bank should do its own independent research into the economic and financial problems of its district.

28. The Federal Reserve System has admirably corrected the evil of scattered reserves and "dead line" reserve requirements which existed under the national banking system, and which was an important factor in the inelastic currency.

29. Under the Reserve system, there are adequate reserve strengthening facilities for banks in need in any part of the country.

30. The inelastic currency for the production and moving of the crops under the national banking system has been corrected under the Federal Reserve through the rediscounting of farmers' paper with the Reserve Banks; and the wire transfers between the Reserve Banks, from the districts where funds are plentiful to the districts in need.

31. The absence of a domestic collection system which existed under the national banks has been corrected by the district collection system maintained by each Reserve Bank for its members, and interdistrict collection system maintained by the Board for the twelve Reserve Banks and their branches. These collection systems are of inestimable value to agriculture and domestic commerce.

32. Commercial and agricultural paper have been standardized to some extent by the Reserve system, as they were not under the national system; however, our standardization of these classes of paper is as yet primitive and there is room for much improvement.

33. Under the Federal Reserve System efforts have been made to establish an open discount market, for commercial paper. Only a meager success has been attained, and there is still much need for further development of the rediscount market for standardized commercial, agricultural, and live stock paper.

34. It was many times demonstrated, and pronouncedly in 1893 and 1907, that the national banking system was without effective facilities for meeting emergencies which affect agriculture as much, or more, than any other industry. The Federal Reserve System has already proved its ability to withstand emergencies and particularly agricultural crises. Examples are

the handling of the cotton loan fund in the autumn of 1914, when the Reserve Banks were just opening for business, the effective meeting of the financial problems of the country throughout the World War, and the crisis of 1920 and 1921 caused by changes in world economic conditions.

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APPENDICES

Due to the scope of the problems of financing agriculture it is not possible to treat all phases of both short and long-term credit in one volume. But for the purpose of reference and for the sake of completeness, there will be found in the several appendices a statement of the fundamental principles and practices of the Federal Farm Loan System, the War Finance Corporation, and the principal types of credit institutions of foreign countries for both long and short-term credit. The author hopes to make available in the near future a complete volume on Farm Mortgage Credit.

APPENDIX A

THE FEDERAL FARM LOAN SYSTEM

Despite the numerous private agencies dealing in farm mortgages the newly organized Federal Farm Loan and Joint-Stock Land Banks seem destined to become the foremost agencies in this field. Undoubtedly the life insurance companies, mortgage banks, state banks and other agencies will continue to do a large business, but the Federal Farm Loan Organization has an advantage due to its national character. At this time there is a National Farm Loan Association in almost every agricultural county of the United States. In the state of Illinois alone there are 149 of these associations.

The specified purposes of the system are well set forth in the title of the Act: "A bill to provide capital for agricultural development, to create a standard form of investment based upon farm mortgage, to equalize rates of interest upon farm loans, to furnish a market for United States bonds, to provide for the investment of postal savings deposits, to create Government depositories and financial agents for the United States, and for other purposes."

In order that a farmer may use the borrowing facilities of the Federal Farm Loan Organization he must first become a member of a National Farm Loan Association. Ten or more farmers desiring to borrow money may organize such an association. In case a National Farm Loan Association has not been formed in any locality the Federal Farm Loan Board may authorize a Federal Land Bank to make loans on farm lands through approved agents. Ten or more persons who own and cultivate farm land qualified as security for a mortgage loan under the Act, or who are about to own and cultivate such land, may form such an association, provided the aggregate of the loans desired by the membership is not less than \$20,000. Each member must take stock in his association to an amount equivalent to 5 per cent of the amount he wishes to borrow.

This stock the association holds in trust as security for the member's individual loan. The association in turn when applying for money from the bank must subscribe for stock in the bank to an amount equivalent to 5 per cent of the sum it wants to obtain for its members. This stock is held in trust by the bank as security for the loans it makes through the association. If a prospective borrower has no money with which to pay for his association stock, he may borrow the price of the stock as a part of the loan on his farm land.

Under this plan, then, every borrower must be a stockholder in his local association, and every association a stockholder in its district bank. Each stockholder in an association is liable for the acts of that association up to twice the amount of his stock.

How Loans are Obtained

A member of a National Farm Loan Association, before obtaining a loan must first fill out an application blank furnished to the loan association by the Federal Farm Loan Bank. This application blank and other necessary papers will then be referred to the loan committee of the association which must appraise the property offered as security. Such application as is approved by the loan committee is then forwarded to the Federal Land Bank and must be investigated and reported on by a salaried appraiser of the bank before the loan is granted. The appraiser is required to investigate the solvency and character of the prospective borrower as well as the value of his land. When a loan is granted the amount is forwarded to the borrower through the loan association.

Conditions Under Which Loans May be Obtained from Federal Land Banks

The Act specifically defines the purposes for which loans may be obtained. They are:

- a. To provide for the purchase of land for agricultural uses.
- b. To provide for the purchase of equipment, fertilizers and live stock necessary for the proper and reasonable operations of the mortgaged farm.
- c. To provide buildings and for the improvement of farm

lands; the term "improvement" to be defined by the Federal Farm Loan Board.

d. To liquidate indebtedness of the owner of the land mortgaged, existing at the time of the organization of the first National Farm Loan Association established in or for the county in which the land mortgaged is situated, or indebtedness subsequently incurred for one of the purposes mentioned in this section.

Loans may be made only on first mortgages on farm lands.

Only those who own and cultivate farm land or are about to own and cultivate such land are entitled to borrow.

No one can borrow save for the purposes stated in the Act and those who after borrowing do not use the money for the purposes specified in the mortgage are liable to have their loans reduced or recalled. The secretary-treasurer of each association is required to report any diversion of borrowed money from the purposes stated in the mortgages.

No individual can borrow more than \$10,000 or less than \$100.

No loan may be made for more than 50 per cent of the value of the land mortgaged and 20 per cent of the value of the permanent insured improvements upon it.

The loan must run for not more than 40 years and not less than 5 years.

Every mortgage must provide for the repayment of the loan by means of a fixed number of annual or semi-annual installments under an amortization plan sufficient to meet all interest and pay off the debt by the end of the term of the loan. The installments required will be those published in amortization tables to be prepared by the Farm Loan Board.

The bank is given power to protect itself in case of default by recalling the loan in whole or in part or taking other necessary action.

The Interest Rate Paid by the Borrower

No Federal Farm Loan Bank is permitted to charge more than 6 per cent per annum on its farm mortgage loans, and in no case shall the interest charged on farm mortgages exceed by more than one per cent the rate paid on the last issue of bonds. For example, if a bank pays only 4 per cent on an issue

of bonds it cannot charge more than 5 per cent for the next farm loans that it makes.

Out of this margin of not to exceed one per cent, together with such amounts as it may earn on its paid-in cash capital, the bank must set aside certain reserves and meet all expenses. Any balance or net profits can be distributed as dividends to the loan associations or other stockholders. The loan associations from their bank dividends, after setting aside the required reserves and meeting expenses, can declare association dividends to their members. In this way the profits, if any, will be distributed among the borrowers and will to that extent reduce the amount of interest actually paid by them.

Restrictions on Fees and Commissions

The Federal Land Banks are specifically prohibited from charging in connection with making a loan any fees or commissions which are not authorized by the Farm Loan Board. The authorized fees need not be paid in advance but may be made part of the loan.

Amortization Plan of Repaying Loans

All loans are to be repayed on the amortization plan. This plan calls for a number of fixed annual or semi-annual payments which include not only all interest and charges due the bank, but the principal as well. These payments are so calculated as to extinguish the debt in a given number of years. After the five years the borrower has the right on any interest date to make additional payments on the principal in sums of \$25 or any multiple thereof, thus discharging the debt more quickly.

Funds Available for Loans

After a Federal Land Bank has loaned on first mortgages \$50,000, it can obtain permission from the Farm Loan Board to issue \$50,000 in farm loan bonds based on these mortgages, sell such bonds in the open market, and use the money thus obtained to lend on other mortgages.

The process of lending on mortgages and selling bonds in issues of \$50,000 may be repeated until bonds to the amount of twenty times the bank's paid-up capital are outstanding. If each

bank should have only its required minimum paid-up capital or \$750,000, this plan will provide eventually, if all the authorized bonds of the twelve banks are sold, over \$180,000,000 to lend on first mortgages on farm lands. The banks, however, can increase their capital stock above their minimum and so increase the amount of bonds they can sell, and thus increase the total amount of money available for loans on farm mortgages.

To make these bonds attractive to investors, the bonds together with the mortgages upon which they are based, are exempt from Federal, state, municipal, and local taxation, and are made legal investments for fiduciary and trust funds. The capital stock of the Federal Land Banks is also exempt from taxation. Federal Reserve Banks and member banks of that system are empowered to buy and sell these bonds. They are to be issued in denominations of \$40, \$50, \$100, \$500, and \$1,000.

Organization of Banks

The temporary management of the Federal Land Banks is to be in the hands of five directors appointed by the Federal Farm Land Board. As soon as the subscriptions from the loan associations take up the capital stock, regular directors are to be appointed as follows: three district directors, resident in the district, shall be appointed by the Federal Farm Loan Board to represent the public interest, and six directors, resident in the district, shall be elected by the farm loan associations who must be stockholders in the bank. The Federal Farm Loan Board shall designate one of its appointees to act as chairman. The Act requires that at least one of the three district directors shall be experienced in farming and actually engaged at the time of his appointment in farming operations within the district. Any compensation paid to the directors must be approved by the Federal Farm Loan Board.

Officers of Loan Associations

Each loan association must have a board of directors and a secretary-treasurer. The directors shall serve without pay. The secretary-treasurer shall receive such compensation as may be determined by the board of directors. The association must appoint an appraisal committee for the purpose of valuing lands

offered as security for loans. No member of such committee shall have any interest in the property upon which he passes.

Funds for Current Expenses

To provide funds for current expenses, the loan association may retain as a commission from each interest payment not to exceed one-eighth of one per cent semi-annually upon the unpaid principal of the loan. This commission is to be deducted from the dividends payable to the farm loan association by the Federal Land Bank. If the commissions are not adequate, and an association does not wish to assess members for current expenses, it may borrow at 6 per cent from the Federal Land Bank, to an amount not to exceed in the aggregate one-fourth of its bank stock.

Reserves and Dividends

The law requires both the land banks and the farm loan associations to make provisions for certain reserves before they can pay any dividends.

Agents of Land Banks

In sections where local conditions do not make the formation of associations practicable, the Farm Loan Board may authorize the Federal Land Banks to make loans through agents approved by the board. These agents are to be banks, trust companies, mortgage companies, or savings institutions chartered by the state. They may receive as compensation the actual expenses involved in transacting the loan and in addition thereto a sum not to exceed one-half of one per cent per annum on the unpaid principal of the loans made through them. When the Farm Loan Board decides that a locality is adequately served by farm loan associations no further loans are to be made through agents.

Joint-Stock Land Banks

In addition to the system of 12 Federal Land Banks and the national farm loan associations of borrowers, the Act permits the establishment of Joint-Stock Land Banks and authorizes them to carry on the business of lending directly to borrowers on farm mortgage security and issuing farm loan bonds. These banks, of which twenty-five are now doing business, must have

a capital of not less than \$250,000. They are under the supervision of the Federal Farm Loan Board, but the Government does not lend them any financial assistance.

The Joint-Stock Land Bank is free from many of the conditions imposed on the Federal Land Banks. Subject to the 50 and 20 per cent value limitations and the limitations as to territory, the Joint-Stock Land Bank may lend \$50,000 to a single individual, and it is not restricted to making loans for the purposes specified in the case of the Federal Farm Land Banks.

The Joint-Stock Land Bank, like the Federal Land Banks, cannot charge an interest rate on farm mortgages in excess of 6 per cent nor shall the interest rate exceed by more than one per cent the rate of interest paid by the bank upon its last issue of bonds. A Joint-Stock Bank is limited in its bond issue to fifteen times its capital and surplus.

Among the restrictions placed on these banks under the Act are (1) that their mortgages must provide for an amortization system of repayment such as is prescribed in the case of the loans through the Federal Land Banks, and (2) that they shall in no case demand or receive under any form or pretense any commission or charge not specifically authorized by the Act and approved by the Farm Loan Board.

The bonds of the Joint-Stock Land Banks are exempt from taxation. Their capital stock, however, is not exempt.

General Provisions

The law, through the Farm Loan Board, provides the necessary machinery for frequent examinations of the banks and the associations, for the proper cancellation of the mortgages, and for the safe custody of mortgages offered as security for bonds. When any mortgage offered as security for bonds is withdrawn, the bank is required to replace the security with other mortgages or other satisfactory collateral.

Heavy penalties of fine or imprisonment, or both, are imposed for violation of the Act, malfeasance in office, fraud, embezzlement, defalcation, or other illegal practices.

APPENDIX B

THE WAR FINANCE CORPORATION

The agrarian interest in the activities of the War Finance Corporation began in the latter part of 1920 when the markets for agricultural products were becoming badly demoralized. The workings of this corporation have only been a matter of general comment in the farm press since the passing of the Agricultural Credits Act, August 24, 1921.

The following extract from the Fourth Annual Report of the War Finance Corporation, November 20, 1921, gives a brief outline of its previous history.

"Originally created as a war agency, as its name implies, the War Finance Corporation was empowered by the Congress in *March, 1919*, to assist in the task of reconstruction and readjustment. It was authorized, in order to promote commerce with foreign nations through the extension of credits, and to aid in the transition from the conditions of war to the conditions of peace, to make advances not exceeding \$1,000,000,000 to American exporters and American banking institutions for the purpose of financing the exportation of domestic products. This authority was exercised until *May, 1920*, when the activities of the Corporation were suspended.

"In the autumn of 1920, when the collapse in commodity markets became acute, the question of our exports again became a matter of general interest; and the Congress, in *January, 1921*, adopted the following joint resolution directing that the activities of the Corporation be resumed:

"That the Secretary of the Treasury and the members of the War Finance Corporation are hereby directed to revive the activities of the War Finance Corporation, and that said Corporation be at once rehabilitated with the view of assisting in the financing of the exportation of agricultural and other products to foreign countries."

Cotton is our principal export crop and this was given the earliest and most careful attention.

"Early in July the Corporation agreed to make an advance of \$5,000,000 to a coöperative association in Mississippi to finance the carrying

of 100,000 bales of long-staple cotton until it could be exported in an orderly manner. Under the terms of this advance the association agreed that out of the cotton pledged as security for the loan it would export within a year a sufficient quantity to repay the full amount of the advance—the cotton to be held in American warehouses until the time was opportune for export. The announcement of this loan stimulated considerable interest, and within a short time the Corporation authorized advances to other coöperative associations in Texas, Oklahoma, and Arizona, as well as to banking institutions in the South, to assist in financing large quantities of cotton for export in a similar manner."

The effect of this financing was highly satisfactory, the price of cotton became stabilized, mills began buying, and merchants began to buy with greater confidence. The War Finance Corporation had now agreed to finance 1,000,000 bales of cotton and it was quite evident that the War Finance Corporation could go much further, and help out other agricultural commodities, as well as railroad equipment, copper, and sugar mill machinery. The plans for financing cotton and other products are summarized in the report as follows:

- (1) For prompt shipment against deferred payments.
- (2) For future shipment within a reasonable time against either prompt or deferred payments, where the products are under a definite contract of sale.
- (3) For prompt shipment to warehouses in foreign distributing points, to be held there for account of American exporters and bankers for marketing out of warehouses.
- (4) For shipment within a definite period, the products to be held in warehouses in this country until they can be marketed abroad in an orderly manner, the applicant to give definite assurance that the agricultural products pledged as security for the advance will be exported, before the maturity of the advance, to an aggregate amount (including insurance and freight if paid by the exporter to domestic insurers and carriers) not less than the amount of the advance.

Conditions Among Stockmen

In spite of this aid to exporters and dealers in agricultural products it soon became evident that the producers themselves

needed assistance. The markets although improving were considerably below normal. The live stock men were in particularly bad shape. Feeders and breeders both were in need of money and were ready to sell "anything that wore a hide" even at the sacrifice prices that a glutted market could offer. There could be no permanent export trade if the producer himself should be put out of business.

J. E. Poole, one of the best writers on live stock market conditions in the West, visited the Chicago yards about Sept. 1st of the past year, 1921. He gives his impressions as follows:

"Strolling about the Chicago yards recently, I noticed a pen of superb Holstein yearling bulls. The owner sat, disconsolate, on the fence-top, berating conditions in general, cattle matters in particular. 'They're good ones,' I suggested. 'Pure-breds,' he responded. 'Every one has a pedigree. But up in our part of Wisconsin you can't interest a dairyman in a pure-bred sire nowadays, with the milk business so badly demoralized; and, as the local butchers wanted to steal 'em, I thought I'd try out the market. But 6½ cents is the best bid so far, and it looks like stealing 'em.'

"Some distance away I ran across a pen of fat Angus heifers, good enough to call for \$10.50 per cwt. They, also, were pure-breds. 'I'm selling them because they realize more than would the old cows, which I can keep to raise more calves,' explained the owner, John Hubly, of Mason City, Ill., who a year ago transported the N. L. Harrison Angus herd from Roggen, Colo., to his farm. 'I intended to junk the cows and keep these heifers for breeders, but it wouldn't work out that way this year.'

"Half the cattle on sale were headed for the shambles prematurely. Over from the stocker division trooped a procession of decently bred yearlings. The owner, a speculator, had bought them early in the week, in expectation of selling them to a feeder; but in the stocker alleys a bid was rare. 'Guess the country has gone broke. Let the first killer that opens his mouth have them.' A few minutes later they went the beef route at \$7 per cwt."

Lack of buying power on the part of feeders was only one cause of a dull market. A commission man said, "Three out of five of my customers putting up the stock cattle proposition to me just now want the full purchase price advanced and I simply cannot raise the money." Packers were asked to finance the

feeding of sheep, but were unwilling to do so. Western ewes in fat shape were on the market at \$2.50-\$2.75 and hard to sell. According to a Texas correspondent, August 18, bankers were refusing to renew cattle paper, and refusing loans on new feeder stock. Stock that was being sold on the market failed sometimes to bring the amount that the banks had loaned on them. In most cases the banks were demanding the full repayment on their loans, leaving the cattlemen nothing to finance their own operations for the coming year. The feeders not being able to buy, this forced the producers to sell on a killers' market for what the packers would pay.

Need of New Form of Credit

"The banks were not to blame for this condition. Many of them had advanced money the previous season to stockmen and feeders who were unable to repay their loans. There seemed to be no assurance that the approaching feeding season would be any more profitable than the last.

The real need of the stockman was for a form of credit that would give him more time than the ordinary six months' credit furnished by the banks under the Federal Reserve Act. Six months' credit is ample for the average steer feeder, but affords very little satisfaction to the man who wants to buy breeding stock. It requires three or four years from the time breeding heifers are purchased until there are steers or other produce for sale from them. The Federal Farm Loan Banks will lend for no shorter period than five years, and only on a first mortgage. Mr. Herbert Quick said:

"If any farmer needs money on farm mortgage, the Federal Farm Loan Act provides a way for him to get it. If he wants it on personal credit, for six months or less, the Federal Reserve System provides it through the banks except for one class of loans. These loans are cattle loans. A man cannot build up a herd of cattle on six-months' paper with safety. He needs at least three years. If he borrows for six months at a time, and depends on renewals he may be pinched by the whims or the necessities or the greed of his creditor at any time.

"I have known men to be ruined in trying to build up herds on this system of renewals every six months. The cattle business in both beef and dairy branches calls for something other than the Federal Reserve

System can give. Many farmers have their land already mortgaged. To them the Federal Farm Loan System, having once been used, cannot be used again. And they need personal credit as much as do their unmortgaged neighbors. Many men needing loans for periods longer than six months do not want to mortgage their farms for them. They need long-time personal credit. Tenant farmers, many of whom enjoy excellent credit at the banks, have no land to mortgage. Cattle raising is only the most obvious instance of crying need. How about many other things (like underdrainage) which will pay themselves out in a few years but which cannot be handled on the basis of their bringing in their cost within six months?"¹

The following extracts from the War Finance Corporation Act as amended by the Agricultural Credits Act of August 24, 1921, give the main features of the act as it applies to the financing of agriculture.

TITLE I.—WAR FINANCE CORPORATION

"That the Secretary of the Treasury, the Secretary of Agriculture and four additional persons (who shall be the directors first appointed as hereinafter provided), are hereby created a body corporate and politic in deed and in law by the name, style, and title of the "War Finance Corporation" (herein called the Corporation), and shall have succession for a period of ten years: Provided, That except as otherwise provided by this Act the Corporation shall not exercise any of the powers conferred by this Act except such as are incidental to the liquidation of its assets and the winding up of its affairs, after July 1, 1922.

"Sec. 2. That the capital stock of the Corporation shall be \$500,000,-000 all of which shall be subscribed by the United States of America.

"Sec. 3. That the management of the Corporation shall be vested in a board of directors, consisting of the Secretary of the Treasury, who shall be chairman of the board, and four other persons, to be appointed by the President of the United States, by and with the advice and consent of the Senate.

"Sec. 12. That the Corporation shall be empowered and authorized to issue and have outstanding at any one time its notes or bonds in an amount aggregating not more than three times its paid-in capital, such notes or bonds to mature not less than six months nor more than five years from the respective dates of issue, and may be redeemable

¹ *Country Gentleman*, April 15, 1922.

before maturity at the option of the Corporation, as may be stipulated in such notes or bonds, and to bear such rate or rates of interest as may be determined by the board of directors, but such rate or rates of interest shall be subject to the approval of the Secretary of the Treasury.

"Sec. 16. That any and all bonds issued by the Corporation shall be exempt, both as to principal and interest, from all taxation now or hereafter imposed by the United States, or by any local taxing authority, except (a) estate or inheritance taxes, and (b) graduated additional income taxes, commonly known as surtaxes, and excess-profits and war-profits taxes, now or hereafter imposed by the United States, upon the income or profits of individuals, partnerships, corporations, or associations.

"Sec. 21. That the Corporation shall be empowered and authorized, in order to promote commerce with foreign nations through the extension of credits, to make advances upon such terms, not inconsistent with the provisions of this section, as it may prescribe, for periods not exceeding five years from the respective dates of such advances.

"(1) To any person, firm, corporation, or association engaged in the business in the United States of exporting therefrom domestic products to foreign countries, if such person, firm, corporation, or association is, in the opinion of the board of directors of the Corporation, unable to obtain funds upon reasonable terms through banking channels.

"(2) To any bank, banker, or trust company in the United States which after this section takes effect makes an advance to any such person, firm, corporation, or association for the purpose of assisting in the exportation of such products.

"Sec. 24. Whenever in the opinion of the board of directors of the Corporation the public interest may require it, the Corporation shall be authorized and empowered to make advances upon such terms not inconsistent with this Act as it may determine to any bank, banker, or trust company in the United States, or to any coöperative association of producers in the United States which may have made advances for agricultural purposes, including the breeding, raising, fattening, and marketing of live stock, or may have discounted or rediscounted notes, drafts, bills of exchange or other negotiable instruments issued for such purposes. Such advance or advances may be made upon promissory note or notes, or other instrument or instruments, in such form as to impose on the borrowing bank, banker, trust company, or coöperative association a primary and unconditional obligation to repay the advance at maturity with interest as stipulated therein, and

shall be fully and adequately secured in each instance by indorsement, guaranty, pledge, or otherwise. Such advances may be made for a period not exceeding one year and the Corporation may from time to time extend the time of payment of any such advance through renewals, substitution of new obligations or otherwise, but the time for the payment of any such advance shall not be extended beyond three years from the date upon which such advance was originally made. The aggregate of advances made to any bank, banker, trust company, or coöperative association shall not exceed the amount remaining unpaid of the advances made by such bank, banker, trust company, or coöperative association for purposes herein described.

"The Corporation may, in exceptional cases, upon such terms not inconsistent with this Act as it may determine, purchase from domestic banks, bankers, or trust companies, notes, drafts, bills of exchange, or other instruments of indebtedness secured by chattel mortgages, warehouse receipts, bills of lading, or other instruments in writing conveying or securing marketable title to staple agricultural products, including live stock. The Corporation may from time to time, upon like security, extend the time of payment of any note, draft, bill of exchange, or other instrument acquired under this section, but the time for payment of any such note, draft, bill of exchange, or other instrument shall not be extended beyond three years from the date upon which such note, draft, bill of exchange, or other instrument was acquired by the Corporation.

"Sec. 25. The aggregate amount of all advances made under sections 21, 22, and 24, and of all notes, drafts, bills of exchange, or other securities purchased under section 24 remaining unpaid, shall not at any one time exceed \$1,000,000,000.

"Sec. 28. No person, bank, banker, or trust company receiving money under the provisions of this Act shall loan such money at a rate of interest greater than 2 per centum per annum in excess of the rate of interest charged or received by the Corporation upon such money."

One of the noteworthy facts about the operation of this Agricultural Credits Act is the rapidity with which the financial machinery of the country was mobilized to handle this \$1,000,000,000 loan. Quick work was necessary if the stock feeding industry was to receive any real benefit. The War Finance Corporation could not deal with individual borrowers. To expedite matters Agricultural Loan Agencies were established in 33 agricultural and live stock districts including Chicago,

Minneapolis, Helena, Spokane, Portland, Ore., San Francisco, Los Angeles, Salt Lake City, Cheyenne, Denver, Kansas City, Omaha, Boise, Ida., St. Louis, Oklahoma City, New Orleans, Atlanta, Chattanooga, Little Rock, Fort Worth, Louisville, Albuquerque, Columbus, Ohio, Des Moines, Detroit and Indianapolis. Men who had experience and ability in financial matters and who had in addition a knowledge of agricultural affairs were selected for these agencies. The purpose and work of the agencies is given below in the announcement of the War Finance Corporation, Sept. 17, 1921.

"The agencies will make recommendations to the board of directors of the Corporation on each application, which will give the directors the benefit of their judgment and knowledge of local conditions. In connection with requests for advances to coöperative associations of producers, applications will be sent direct to the War Finance Corporation, Washington, for action and not through the agencies. Likewise in the case of banks, located in districts where Agricultural Loan Agencies have not been established, applications will be addressed directly to the Corporation at Washington. Under the terms of the act any reputable and responsible financial institution with resources adequate to the undertaking contemplated may become a borrower provided the financial institution has itself made advances for agricultural purposes, and the total advance which may be made to any one applicant is limited to the aggregate of any outstanding advance made by it for agricultural purposes."

How Loans are Made

For illustration of how loans are handled, the cattle industry will be taken as an example. Some interesting information was obtained in a pamphlet recently published by the Security Trust and Savings Co. of Los Angeles, entitled, "The Cattle Industry of the Southwest."

"The cattle industry is financed both by banks, which make loans directly to stock raisers, and by privately-operated loan associations, which purchase and endorse cattle paper for rediscount through the banks. A cattle loan is secured by the promissory note of the borrower, together with a chattel mortgage on his livestock and equipment, and sometimes by a mortgage on his real estate.

"In the stock raising regions of the Middle West, financing through loan associations is undertaken extensively by large packing com-

panies, who are interested in keeping the industry in a healthy condition to the end that there may be a steady flow of livestock to the packing-houses. In Southern California and Western Arizona cattle loan associations have recently appeared. Cattlemen have heretofore relied almost entirely upon bank loans and upon money advanced by private individuals.

"In the past few years a comparatively small number of cattle loan associations have begun business in Southern California, with offices at Los Angeles. Most of them are closely allied with packing interests.

"These cattle loan associations have come into existence mainly on account of the difficulties experienced by cattlemen in securing bank loans. Banks have been proverbially cautious in accepting cattle paper. Livestock security is necessarily of changing value, inspection is difficult and expensive, renewals are usually requested, and enterprises too often of a speculative nature.

"Meat-packing companies have encouraged and assisted the incorporation of cattle loan associations in stock raising centers, for the better financing of the industry. These associations on the whole develop highly efficient organizations. The officers ordinarily include practical cattlemen and experienced livestock buyers, who are familiar with every angle of the industry. Stockmen actively engaged in raising cattle are made managing directors, inspectors are appointed in the range districts, and accurate records of pasturage and weather conditions, quality of breeds, and prevalence of disease are collected, with other information of interest to the business. Through such organizations cattle loan associations are equipped to render valuable service both to cattlemen and to the community.

"The method of making loans to cattlemen by banks and loan associations is fairly uniform. The prospective borrower files a written application accompanied by a sworn statement of his financial condition. The statement includes a description of the stock which he proposes to offer as collateral, his facilities for taking care of them, real estate owned or leased, and outstanding mortgages or obligations. The bank or loan association checks up on this statement by private inquiries, and county records are examined to determine whether the applicant's are correct as to outstanding obligations. A cattle inspector is then sent out to count and examine the borrower's stock. He reports as to quality of breeds, condition of pastures, facilities for taking care of the stock, and the general reputation and ability of the applicant. If, upon receipt of the inspector's report, the loan is granted, the borrower is required to sign a promissory note for the amount advanced, and to execute a chattel mortgage on the stock and

its increase, feed on hand, and sometimes on equipment and real estate. Although banks and the more conservative loan associations refuse to loan more than from 50% to 75% of the value of stock given as collateral, less careful associations consider that an ample margin of safety lies in the probable increase of the herds, i. e., in birth of calves and increase in weight of steers.

"Cattle paper is self-liquidating. It is short-term paper and when endorsed by reliable cattle loan associations becomes good 'two-name' paper. It should therefore enjoy a high degree of liquidity. Loan associations dealing in cattle paper may handle large amounts, running into the millions of dollars annually, with comparatively small working capital. When these associations grant loans which are too large for discount through any one bank, such loans are parceled out among several banks.

"The peaks of activity in cattle loan discounts are reached in the spring and fall seasons of the year. Cattlemen usually need money for the purchase of new stock for the ranges in April and May. Holders of leased ranges ordinarily pay their rent in the fall. This is also the usual time for settlement of ordinary bills for groceries, feed and supplies."

"At the outset of operations under the War Finance Corporation amendment, Colorado apparently preferred to try its own resources already organized in regard to getting these moneys to the needy banks and husbandmen. Banks, trust companies, and cattle-loan companies already organized, it was believed, would serve as ample conduits for the flow of many millions of beneficial capital. It soon became apparent, however, that most of these institutions, rather than lead in more capital, were inclined to sidestep further the responsibility in the matter of outfitting the grower with funds. The 2 per cent margin offered by the government failed to induce business. Some banks utilized the law to good effect; others grew discouraged over what they termed the volume of red tape; still others, too bewildered to work anything out of the proposition, 'laid down' on the job. Some of the cattle-loan companies found that to extend themselves further into loans on their slender capital was impolitic, eastern correspondents being inclined to call at once for payment on papers theretofore issued and held by them."

"With more than three months gone by since the amendment was enacted, not much over \$100,000,000 of this great fund of \$1,000,000,000 had been disseminated in this country. In Colorado, by December 1, not over two and one-half million has been paid or authorized from

Washington for the state grower. Somehow the machinery for the dissemination of this cash had failed to function.

"Wyoming and Utah had proceeded immediately to the creation of a loan company of state-wide capitalization which should function as the main agency in getting loans to the government.

"The Live-Stock Finance Corporation of Colorado is here now, but it was sadly missing during those weeks when all eyes were cast upon the banks and trust companies, etc., as the mediums which undoubtedly would see the opportunity of a lifetime and grasp in these millions. Bankers and other interests at the Denver Union Stock-Yards saw at last that it was useless to wait, and hurried the organization into shape. It is now in the course of placing its capital stock among the banks of Colorado on ratios measured by 5 per cent of the capital stock of those institutions. The Denver Live-Stock Exchange has accelerated the disposal of its shares by underwriting \$100,000."

"The Bankers Loan Company was organized early last October to procure loans from the War Finance Corporation for live stock men secured by chattel mortgages on live stock. It was incorporated primarily for the purpose of keeping names of banks off the back of paper so that their credit could be used for other purposes. It is owned by the sheep men and cattle men of this intermountain country.

"We have handled or are handling 675 applications for loans involving a total of \$3,027,000. The average application is \$4,548. We have only received cash on 8 loans aggregating \$100,000, but expect to get money much more rapidly now our machinery is in shape. By July 1st we anticipate that we will have secured \$10,000,000 for the live stock interests of the intermountain country at a rate of $7\frac{1}{2}$ per cent or less, with the assurance that if they keep their flocks and herds up to standard they can have the money for three years or they can pay it the next day if they want to.

"Applications should come through the banks, preferably the bank of which the applicant is a regular customer. Real estate might be taken as security but that had not been necessary. Loans were made to the extent of 60 to 80 per cent on ewes usually \$5 to \$7.50 per head. Single loans would be made up to \$100,000. Inspection charges were made at actual cost. Inspectors are paid by the day at the rate of \$250 a month, plus expenses, and we never send one out unless we have from 5 to 50 applications for him to take out, and then we divide up the cost. One man kicked about the inspection charge on his loan. I looked it up and found he had received a \$30,000 loan with an inspection charge of \$22.50. Inspections of herds were made every 6 months."

Interest Rates on Loans

"The War Finance Corporation announced on Nov. 3, that it had reduced its interest rates on advances to banks for agricultural or live stock purposes under Sec. 24 of the War Finance Corporation act, from $5\frac{1}{2}$ to 5 per cent on all advances maturing in 6 months or less, without the privilege of renewal, and on all other advances to banks for agricultural or live stock purposes under Sec. 24 of War Finance Corporation Act from 6 per cent to $5\frac{1}{2}$ per cent."

Banks were not allowed to charge over 2 per cent above these rates to cover cost of handling the loan. It was rumored that in some cases banks were charging more.

Obtaining Loans

Blanks on which applications for advances could be made were to be obtained from either the local Agricultural Loan Agency of the War Finance Corporation, the nearest Federal Reserve Bank or Branch Bank, or from the Live Stock Finance Corporation if there was one in the state. The following is a list of the forms required.

- Form A. Application for Advance.
- Form B. Schedule of Agricultural Loans made by Bank.
- Form Ba. List of Collateral offered as Security.
- Form C. Resolution of Board of Directors.
- Form D. Certificate of Names of Bank Officials.
- Form E. Form of Obligation (Promise to pay).
- Form F. Report on Condition of Bank.
- Form G. Financial Statement of Farmer.
- Form H. Financial Statement of Merchant.
- Form I. Opinion of Counsel for Applicant.
- Form J. Certificate of Agricultural & Live Stock Agency.

This may seem like a lot of red tape but as W. W. Armstrong, the banker previously mentioned, stated in his address, "It is good red tape. You do not want any loan made by the War Finance Corporation that is not perfectly safe and that will not be repaid. If conservatism and red tape will save the good name of this intermountain let us have them wrapped all round it."

Some Sample Loans Made to Exporting and Coöperative Concerns by the War Finance Corporation

The following were reported by the *Commercial & Financial Chronicle*, Nov. 5, 12, 19, 1921.

- Nov. 1. \$1,000,000 to Louisiana concern for exporting wheat and cotton.
- “ 1. \$500,000 to Louisiana concern for exporting wheat and cotton.
- “ 1. \$955,393 for live stock in various states.
- “ 2. \$300,000 to Coöperative Association in California on canned fruits and vegetables.
- “ 7. \$1,000,000 to a coöperative concern in Arkansas on rice.
- “ 9. \$1,250,000 to coöperative concern in California on rice.
- “ 4. \$250,000 to exporter to finance export of tobacco to China.
- “ 4. \$18,640 to exporter to finance exportation of sugar mill machinery to South Africa.
- “ 4. \$300,000 to export tobacco to Great Britain.
- “ 15. \$500,000 to export agricultural machinery to France.
- “ 14. \$4,150,000 to finance sugar beets in Idaho and Utah.

How the War Finance Corporation Aids Coöperative Concerns (*Commercial & Financial Chronicle*, Mar. 4, 1922.)

ADVANCE BY WAR FINANCE CORPORATION TO BURLEY TOBACCO GROWERS ASSOCIATION, MARCH 4, COMMERCIAL & FINANCIAL CHRONICLE

The War Finance Corporation announced Feb. 20 that it had approved the formal petition of the Burley Tobacco Growers' Association of Lexington, Ky., for an advance of not exceeding \$10,000,000.

“The Burley Tobacco Growers Association was stated to be the largest coöperative marketing association in the United States having approximately 55,000 members and controlling close to 200,000,000 pounds of Burley Tobacco.”

The Cincinnati Enquirer, Dec. 24, 1921, said in regard to the organization and plans of financing:

"Arrangements would have to be made for banks to borrow money with which to pay the Burley Growers their 50 per cent of the value of tobacco placed in the association warehouse.

"It is expected the total storage will amount to 200,000,000 lbs. and that between 135 and 150 warehouses will have been turned over to the Association by the time it will become necessary to negotiate the loans. It was intimated that the preliminary financing would require from \$5,000,000 to \$8,000,000. This money will go to the Burley Growers as a fund upon which they can draw when they are given the warehouse receipts for the tobacco turned over to the Burley Pool. The farmers in the four districts of the Association will deliver their tobacco to the association warehouses and receive a receipt for it.

"After the tobacco has been received, the warehouse will be closed for a period of ten days or more, during which the tobacco will be graded, dried, prized and stored. When that is accomplished the individual farmer will be given his regular warehouse receipt on which is specified the number of pounds of each grade that he has turned over to the Burley Association.

"The warehouse receipt is in the form of an inland trade acceptance representing 50 per cent of the graded in or appraised value of the tobacco. The farmer can take this to the bank where he will be able to discount it at the current discount rates of his bank. The remainder of his money will be paid when the tobacco is sold."

REPORT OF WAR FINANCE CORPORATION UP TO FEB. 4, 1922

Advances to Assist in Financing Exports.

Grain	\$ 5,209,810.69
Tobacco	3,591,369.77
Cotton	33,572,373.21
Canned fruits	400,000.00
Meat products	1,000,000.00
Condensed milk	1,000,000.00
Textile products	250,000.00
Sheet steel	180,000.00
Copper	145,000.00
Sugar mill machinery	470,966.36
Agricultural machinery	500,000.00
Railroad equipment	2,925,000.00
Lumber	1,000,000.00
Total	\$50,245,120.03

Advances for "Agricultural and Livestock purposes."

(Under Section 24.)

A To Banking Institutions

(a) By commodities

Cotton	\$23,404,200.52
Grain	21,290,189.31
Live stock	49,641,606.95
Sugar beets	9,796,000.00
Rice	2,500,000.00
Canned fruits	300,000.00
Dried fruits	1,250,000.00
Peanuts	1,097,000.00
General agriculture	93,546,169.50
Total	\$202,825,166.28

(b) By States (36)

Iowa	\$19,591,389.37
North Dakota	12,460,456.16
Texas	12,313,493.14
South Dakota	10,587,649.50
Utah	10,099,225.00
Nebraska	8,699,473.77
Minnesota	7,800,558.90
South Carolina	7,006,678.46
Missouri	6,702,710.44
Montana	6,522,592.50
Wyoming	6,006,364.38
Colorado	4,531,476.81
Georgia	4,439,500.00
Illinois	3,943,000.00
Kansas	3,895,988.15
North Carolina	3,562,500.00
New Mexico	3,561,359.50
Wisconsin	3,235,500.00
Oregon	2,902,012.06
Arizona	2,433,000.00
Idaho	2,047,618.00
Virginia	1,727,700.00
Oklahoma	1,785,244.96
California	1,535,011.56
Louisiana	1,399,399.77
Tennessee	1,094,500.00
Mississippi	867,838.19
Ohio	734,806.00
New York	600,000.00
Florida	645,000.00
Indiana	596,000.00
Kentucky	346,388.56
Nevada	248,000.00
Arkansas	116,000.00
Alabama	66,300.00
Total	\$154,438,050.00

B To Coöperative Institutions

Arizona	\$ 1,200,000.00
Arkansas	1,250,000.00

California	\$2,800,000.00
Idaho	962,355.66
Minnesota	15,000,000.00
Oklahoma	6,000,000.00
Tennessee	5,060,060.29
Texas	9,787,566.50
Virginia	1,000,000.00
Washington	5,237,833.65
Total	<u>\$48,387,816.10</u>
C Summary	
To Coöperative Institutions	\$ 53,650,000.00
“ Banking & Financing Institutions	190,560,277.42
“ Exporters	<u>8,960,708.89</u>
1 Total	<u>\$253,070,986.31</u>

It will be seen that some of the totals do not seem to coincide with others. This is due to refunds and other changes.

Conclusions

1. Long time personal credit is badly needed by agricultural interests to fill in the gap between the six month paper allowed by the Federal Reserve Banks, and the five year minimum of the Federal Farm Loan System.

2. Cattle paper is safe if based on proper methods of inspection and valuation, and should be used to a greater extent than at present.

3. The War Finance Corporation was badly needed at the time it was put into operation, and has done a great deal to save the owners of agricultural produce from having to sell at unreasonably low prices on a disorganized market.

4. A permanent live stock loan system should be put in operation to take the place of the War Finance Corporation when it is dissolved.

5. Confidence was needed even more than cash. Only about 25 per cent of the available funds have been used.

“The very existence of the corporation has tended to inspire confidence, has opened up other avenues of credit, and has facilitated the

¹ Professor C. I. Bray of Colorado State College assisted in the preparation of this report.

financing of transactions through the usual channels . . . The experience of the corporation has been that wherever it has lent or agreed to lend a dollar, it has produced confidence to such an extent that others were willing to lend many dollars."

(Fourth Annual Report. War Finance Corporation.)

6. Credit of this kind will not do any harm unless overdone. No good can be done by allowing goods to be dumped on bad markets, when the buying public does not want the goods.

7. A distinction should be made between "elastic" credits and "inflated" credits. Elastic credits that are available in case of financial stringency are the best check against hard times, and can be liquidated gradually as times get better.

8. The War Finance Corporation will undoubtedly retard the decline of prices to normal levels, but it will also do a great deal of good by creating confidence and act somewhat as a shock absorber through the adjustment period.

APPENDIX C

THE CRÉDIT FONCIER OF FRANCE

The Crédit Foncier was not founded upon the coöperative principles of the *Landschaften* but rather upon business principles. It is purely a joint-stock company and its object is to earn dividends for shareholders. This bank, the "Crédit Foncier," plays the same part in real estate credit that the great central bank of France does as a regulating establishment for the commercial credit of the country. Like most ingenious inventions and organizations, the "Crédit Foncier" was the outgrowth of an emergent necessity. Prior to the organization of the bank the rural credit facilities of France were in shattered conditions. Agricultural societies and conventions, prominent citizens and the legislative assembly had discussed plans of amelioration and voluminous books had been written and projects proposed without number. The outcome of all this agitation was a national association of persons most deeply interested who formed distinct proposals for the establishment of a land bank. Then the Government took up the matter, made an official inquiry of all projects, examined economists, financiers, public officials and lawyers, and appointed a commission to carry on an investigation and make a report. The result was the enactment (1852) of a general law for land mortgage banks under which the "Crédit Foncier" was immediately formed.

This law provided for Government control by the departments of Agriculture, Commerce, and Finance and allowed the State and *arrondissements* to assist the bank by investing in their debentures. In 1854 the Crédit Foncier was given a monopoly of all rights under this law, and a subvention of \$2,000,000 as a guarantee fund. The Government bought a quantity of its debentures and allowed the other political divisions of the state to do the same. The original system of triple control was abolished by the decree of 1854 and a system of organization bestowed on the Crédit Foncier similar to that of the Bank of France. The monopoly of the Crédit Foncier

was not renewed but it lasted long enough to safeguard the bank against all possible competitors.

The legal privileges that the *Crédit Foncier* enjoys under the original law and the amendments made thereto may be summarized as follows:

1. The Governor and two deputy Governors are appointed by the president of the republic.

2. The board of directors is composed of 20 members who are named by the general assembly of stockholders.

3. Three members of the directorate must be chosen from the chief officials of the government treasury.

4. The censors, three in number, are also named by the general assembly.

5. The bank is thus directed by this combined authority, state inspection, and the supervision of the general assembly of stockholders.

6. The bank may use the government treasuries for the receipt of its dues, and the deposit of its surplus funds.

7. The taxes and stamps for registration and the transfer of its debentures are less than for others.

8. The debentures may be made payable to bearer and the court cannot recognize any claim by a third party for these bonds, except only in cases of loss or theft.

9. Trust funds may be invested in these debentures.

10. The mortgages held by the bank are not required to be registered every ten years as the general law provides.

11. The bank is legalized to free the title of real estate to all possible claims of third parties. After assuring itself that the title is clear of all registered claims, it starts a procedure called the "purge" which brings to light any hidden claims. It consists of an official notice published, calling on third parties to show their rights. It is only a modified form of the *Torrens System*.

12. The bank does not have to resort to ordinary foreclosure for the recovery of a loan. The court cannot grant the defaulter any delay. The mortgaged property may be attached by order obtained from the local civil court. During attachment the bank has the right to all rents and returns of the estate subject only to that of the Government and court costs. The bank may proceed without attachment to sell the property after

due notice has been given and published. The company has the first claim on the proceeds of defaulted property.

13. The debentures of the bank may be issued payable to bearer and have no fixed time for maturity.

14. The debentures may be made repayable with prizes and bonuses.

15. The amount raised by the issue of debentures must not exceed the amount due the company.

16. Loans cannot be made except upon a specified portion of the value of the land, and on a first lien.

17. The shares issued by the company must be kept at the ratio of at least one-twentieth of the debentures in circulation.

18. The maximum rate of interest to debtors is fixed by law at not more than 5 per cent.

19. The bank cannot buy or make advances on its own debentures.

The Crédit Foncier is authorized to make loans of two descriptions:

1. Mortgage loans for long periods with amortizements; the period may be from ten to seventy-five years according to the plan chosen. The borrower may make advanced payment in whole or in part at any time. Payments may be made in cash or debentures of the company of the same series as the loan. The loan is liable to recall only if the property is sold without notice to the company or is allowed to deteriorate. Loans cannot exceed one-half the value of the property, or one-third of the value for vineyards, woods, or plantations.

2. Loans on mortgages for a short date without amortizements. These are for periods of from one to nine years. Repayments may be in lump sums or by semi-annual installments in advance.

The law further allows the Crédit Foncier to use any other system or method of making loans with the Government's sanction to improve the soil, develop agriculture, facilitate loans on immovable property and extinguish existing debts thereon. Under this provision of the Statute the powers of the bank have been extended into such fields as taking the bonds of a big contracting and building company and lending money to a land mortgage bank in Algiers.

APPENDIX D.

FINANCING OWNERSHIP IN ENGLAND

Plan for Financing Occupying Owners in England

England has not developed a nation-wide system of financing farmers for the purchase of agricultural lands as Germany, France and the United States have. Like the United States, there has developed in England and her colonies many schemes of land mortgage banking. However, the financing of tenants and small farmers has been for many years a problem of growing difficulty in the heart of English progress. Many plans and schemes have been proposed as a solution to this problem. J. H. Clifford Johnson (1915) proposed a scheme under the title of "The Financing of Occupying Ownership and Coöperative Credit" which has not been adopted, but the plan is so unique and well founded upon economic principles that the three chief features of the plan as summarized by its author are here presented: ¹

1. Landowner to be paid the purchase price as to 25 per cent in cash and as to 75 per cent in 3 per cent state guaranteed bonds taken at their market price; by which is meant increasing the purchase price to such an amount in excess of the cash valuation that by selling the bonds representing 75 per cent of the increased price at their market discount the actual value is realized in cash.

2. The whole of such purchase price to be advanced to the farmer for an annuity of £4 10s 6d per cent for 18 years and £2 18s 0d per cent for the following 49 years.

3. The stipulation to be made that the present value of the farmers' annuities calculated at the current rate of interest for farm purchase (i.e., the rate of interest represented by the year's purchase taken in calculating the cash value of the farm) must not exceed 85 per cent of the cash value of the farm.

¹ J. H. CLIFFORD JOHNSON, "Financing of Occupying Ownership and Co-operative Credit," 1915.

Variety of Mortgage Banks

Nearly all progressive countries have provided for the long-term credit needs of agriculture. Land mortgage banking is done through many different types of organizations but all are in their principles a modified form of the *Landschaft* or the *Crédit Foncier*. However, it should not be thought for a moment that the government and semi-government land mortgage organizations as the *Landschaften*, *Crédit Foncier*, the Federal Land Banks and the proposed government plan for financing ownership in England, are the only grantors of long-term credit to farmers. Each country has numerous types of land mortgage lenders; in Germany there are the agricultural mortgage banks, joint-stock mortgage banks, savings banks, and improvement annuity banks; in France the joint-stock mortgage bank, savings banks, and the *Crédit Agricole*; in England joint-stock banks with branches in rural districts, land companies and private lenders, and these are not all, but only the chief mortgage lenders other than the national types discussed.

APPENDIX E

THE GERMAN LANDSCHAFT¹

The Landschaft is a widely advertised form of mortgage-bond institution. The first one was formed in Prussia in 1770 by royal decree of Frederick the Great, who forced the needy land owners of that province to combine to obtain funds to rehabilitate their rundown estates.

The Landschaft is a syndicate of borrowers—landowners who are jointly and severally liable without limit for all securities issued by the association. Its object is to obtain cheap and facile credit for its members. It has no capital and pays no dividends. All profits are placed in reserve. It is financed by its debentures. These debentures are secured by the underlying mortgages, by the reserve and the unlimited liability of its members. The amount of debentures outstanding is never allowed to exceed the face value of these mortgages. The debentures have no fixed time for maturity but are recallable at the option of the association, which is done by lot. All loans are for a long period of thirty to seventy-five years, and are gradually extinguished by semi-annual installments which include with the interest a portion of the principal under the amortization arrangement that is common all over the continent.

In granting a loan, the title deeds of the landowner are examined, the property inspected and appraised. When all requirements have been met the landowner executes his note and mortgage to the association which gives him not cash but debentures representing his loan which must be a first lien. The maximum loan is two-thirds and the minimum one-half the appraised value. The interest charge to the borrower has generally run at 3, 3½ or 4 per cent. In case the borrower commits waste, or carries on a reckless business, the association may take

¹ Landschaften—Handwörterbuch der Staatswissenschaften, Sechster Band. Dritte Auflage, 1911, von Dr. J. Hermes, pp. 333-348; Die Landschaften und landschaftsanleihen Kreditinstitute in Deutschland, von Dr. F. Heckt, 1911, pp. vii-xxxi.

possession of the mortgaged premises. In the event of default the association may levy on all the personal property and sell the same after simply serving notice. If the proceeds of such sale be insufficient the association may then take over control of the land and if enough is not obtained to pay up the overdue installments an order of sale may be obtained simply by presenting the arrears from the books of the association. The court cannot go into the merits of the case.

Then the characteristic features of the *Landschaften* are co-operative credit, unlimited liability of members, and the right of the association to take possession of the property and force a sale without resort to regular foreclosure proceedings. This legal anomaly is due to the fact that the *Landschaften* are practically government institutions. Their officers are quasi-public officials endowed with judicial and executive powers on all matters between themselves and their members, and these members are subject to their orders and are bound under heavy penalty to perform all duties imposed on them.

Nine of the old *Landschaften* founded a Central *Landschaft* (1893) to which eight still adhere. The Central *Landschaft* buys the debentures of the Provincial Associations, taking an assignment of the underlying mortgages and issues against them its own debentures which find a ready sale to investors and on the money exchanges.

The *Landschaften* have been very successful. It would take several volumes to tell the full story of what these institutions have done for German agriculture, but that has been retold many times in the United States and does not command a place in this work. However, the influence of the *Landschaften* has not been circumscribed by the boundary lines of the Prussian Empire but they have been either directly or indirectly the models after which land credit organizations have been founded in many foreign countries. The most noted land credit institution that has yet existed is the *Crédit Foncier* of France, and its conception is said to have been excited through the great success of the *Landschaften*.

APPENDIX F

AGRICULTURAL IMPROVEMENT BANKS OF GERMANY (Landeskultur-Rentenbanken) ¹

(1910)

Germany has led the world in this branch of banking. Long before the other nations had realized the need of agriculture for long-term improvement credit Germany had established public institutions for this important purpose. Such institutions were first created in Saxony in 1861, and then in Prussia, Hesse, and Bavaria. These institutions loan for the purpose of agricultural improvements in the broadest sense, to landowners, companies, and communities.

The real purpose for which these institutions were established was as stated, to increase the capacity of the soil to yield income. Pursuing this idea the purposes which these banks serve to advance, according to the Prussian Law of 1879, are:

(a) For the advancement of agriculture, especially for drainage and irrigation, for the building and repairing of roads, for planting forests and making land tillable, and for the introduction of new agricultural economy; (b) for the building of protections for river banks; (c) for the building, extension, and maintenance of dykes and structures pertaining to the same; (d) for the construction, use, or maintenance of water courses or artificial lakes for aids to navigation.

These are the principal purposes which the banks serve. Each bank, however, is limited by the statute of its respective province. For example, the advancement of drainage is expressly forbidden to the institution of Schleswig-Holstein, while the institution of Posen devotes itself exclusively to drainage and irrigation.

In making loans, consideration is given to the already exist-

¹ Landeskultur-Rentenbanken, Handwörterbuch der Staatswissenschaft, Sechster Band, Dritte Auflage, von Dr. J. Hermes. pp. 325-331, 1910.

ing mortgage indebtedness. In Prussia the amount of a loan (except in Saxony where it is unlimited) is fixed at twenty-five times the income of the land tax, or one-half of the value of the real estate, which is ascertained by the *Landeskultur-Rentenbank* on the basis of agricultural or other special estimates. The increase of the value of the real estate resulting from the enterprise may be taken into account with loans for improvement proper.

Loans are made either in cash or annuities. They are not callable unless the debtor becomes negligent or other conditions calling for revocability are present. Loans may be amortized by installments. By the law of Saxony 1888, the total payment of the debtor is fixed at $4\frac{2}{3}$ per cent of the amount of the loan, of which $1\frac{1}{3}$ per cent is used for redemption, so that the debt is liquidated in thirty-eight years. In Bavaria at least one-half per cent is to be paid to the sinking fund, and in Hesse three-fourths per cent annually. The annual payments to be made by the debtor are endorsed everywhere by administrative compulsory proceedings.

Individual landholders are required to use the loans for a definite purpose and maintain plans already carried out. Control over the use of loans by corporate and communal undertakings lies in the constitution and organization of the borrowing institution; and so far as supervision is needed, this falls chiefly to the regular communal supervising authority and not to the bank. However, the technique of the requirements differs with each bank and province.

The results of the work of these institutions are reported as satisfactory, but up to the present they have only fulfilled a part of the work expected of them. The reason for this is thought to be due to the skepticism of the rural classes and the already existing heavy indebtedness resting upon the land.

Along with other purposes, credit is supplied to farmers for improvements and equipment by joint-stock banks and coöperative credit societies including the *Raifeisenche Darlehenstassenvereine*.

APPENDIX G

FINANCIAL STATEMENT—FARMER

IMPORTANT—Please fill all blanks, writing "no" or "none" where necessary to complete information.

Name..... To the..... Bank

Address.....

For the purpose of obtaining a line of credit with you not to exceed \$....., I tender the following statement of my farming business as of..... 191....., and agree to notify you promptly of any change affecting my ability to pay.

PROPERTY OWNED BY UNDERSIGNED				DEBTS DUE BY UNDERSIGNED			
	Dollars	Cts.			Dollars	Cts.	
Cash (on hand and in banks).....				Notes secured by chattel mortgages (list below).....			
Notes due me (amount collectible).....				Payable to above Bank.....			
Accounts due me (amount collectible).....				Due..... Secured by.....			
Farm products; grain, cotton, etc., at market value (list on other side).....				(Describe Security).....			
Live stock—market value (list on other side).....				Payable to.....			
Machinery and tools (list on other side).....				Due..... Secured by.....			
Farm lands (describe on other side).....				(Describe Security).....			
Other lands (describe on other side).....				Payable to.....			
Improvements on farm (describe on other side).....				Due..... Secured by.....			
City real estate (describe on other side).....				(Describe Security).....			
Other assets (describe fully).....				Notes due to above Bank—unsecured.....			
				Other notes due by me.....			
				Accounts due by me.....			
				Mortgages or liens on real estate owned (describe in space provided on other side).....			
				Other debts (describe fully).....			
				Net Worth.....			
Total.....				Total.....			

Amount of the assets listed above which are exempt by law - - - - - \$.....

Amount for which I am liable for partnership obligations - - - - - \$.....

Amount of the assets listed above which are pledged to secure my debts - - - - - \$.....

Amount for which I am liable on notes and accounts, not included in above statement, which have been transferred to banks or others - - - - - \$.....

Amount of liability incurred by endorsement or guaranty to accommodate others - - - - - \$.....

Amount of liability on bonds, leases or other unfinished contracts - - - - - \$.....

Amount of insurance carried on farm products \$.....; on machinery, etc., \$.....; on improvements \$.....; on other assets \$.....; and on my life \$..... in favor of.....

Number of years in present business..... Number of years at present location.....

I solemnly declare and certify that the above statement, and schedules on opposite side are a true and correct account of the condition of my business on the day above stated.

Witness my hand, this..... day of..... 191.....

WITNESS:

..... (Signature).....

NOTE: If you have ever failed in business, attach a complete explanation and state basis of settlement with creditors, (Fill Blanks on Other Side)

Form C-4. Federal Reserve Bank of Dallas.

FARMER'S FINANCIAL STATEMENT

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LIST OF REAL ESTATE AND IMPROVEMENTS OWNED, WITH INCUMBRANCES THEREON

(Listed in totals on other side.)

Acreage or Dimensions	Location	Description of Improvements	Valuation		Mortgages or Liens		Title to Property in whose Name
			Assessed	Actual	When Due	Amount	
			\$	\$		\$	

LIVE STOCK.

(Listed in total on other side.)

	Horses	Mules	Cattle	Hogs	Poultry	Sheep	Goats	Total Value
Number								
Value	\$	\$	\$	\$	\$	\$	\$	\$

MACHINERY AND TOOLS.

(Listed in total on other side.)

	Wagons	Cultivators	Mowers	Threshers	Engines	Binders	Other Tools	Total Cost
Number								
Cost	\$	\$	\$	\$	\$	\$	\$	\$

Less Depreciation \$

Actual Value \$

FARM PRODUCTS.

(Listed in total on other side.)

Corn \$	Oats \$	Wheat \$	Hay or Forage \$	Fruit (Dried or Canned) \$
Cotton \$	Wool \$	Potatoes \$	Ment \$	Other Products \$
				Total \$

AVERAGE EXPENSE AND YIELD.

	Cotton	Corn	Wheat	Oats	Forage	Other (describe)
Average yearly expense per acre for plowing, planting and working crop prior to gathering	\$	\$	\$	\$	\$	\$
Average yearly expense per acre for harvesting	\$	\$	\$	\$	\$	\$
Average yield per acre	Bale	Busbels	Busbels	Busbels	Tons	

STATEMENT OF FARMING OPERATIONS, OR CROPPING SYSTEM.

Farm is located where

Number of acres in farm. Number of acres to be cultivated.

Number of people living on farm. Farm is owned by.

I am to pay as rent.

Crops and Stock to be Produced.

Acre in Corn (Legumes interplanted)	Acre in Peas or Beans	Acre in Vegetable Garden
Acre in Oats (Legumes following)	Acre in Forage crop and kind	Acre in Other crops and kind
Acre in Wheat (Legumes following)	Acre in Hay crop and kind	Acre in Pasture
Acre in Cotton	Acre in Potatoes	Acre in Bearing Fruit
Acre in Grain Sorghums	Acre in Rye	Total Acres
Number Beef animals to be marketed	Quantity Fresh Fruit for marketing	Quantity Fruit and Vegetables to be canned
Number Hogs to be fattened	Quantity Dried Fruit for marketing	Loads Manure to be used on crop
Number Sheep or Goats to be marketed	Quantity Poultry and Eggs to be produced	Tons Commercial Fertilizer to be used
Pounds Wool to be produced	Number of Cows in milk	

NOTE—The character of the Cropping System of a farm business has a credit value of the highest importance to both the farmer and the lender; and as farming is the annual investing of capital and labor at one place, safety requires, as in other investments, that all the capital and labor be not invested in one thing, or in the production of one crop.

In order that farming operations may be conducted on a safe and profitable basis every year, diversification is absolutely necessary. Every farmer should raise enough poultry, hogs, milk cows, vegetables and fruit to supply the family with most of their necessary food. A sufficient number of acres should be planted in feed crops to feed the stock on the farm or to feed stock for the market, if desired; part of the land should be planted in food crops for the market and the balance in other crops, BUT NOT MORE THAN 50% OF THE CULTIVATED LAND SHOULD BE PLANTED IN ONE CROP. Such a plan should enable the farmer to pay his debts promptly every year and result in greater prosperity for him.

FINANCIAL STATEMENT—STOCKMAN

IMPORTANT—Please fill all blanks, writing "no" or "none" where necessary to complete information.

Name _____ To the _____ Bank

Address _____

For the purpose of obtaining a line of credit with you not to exceed \$_____, I tender the following statement of my business as of _____ 192____, and agree to notify you promptly of any change affecting my ability to pay.

PROPERTY OWNED BY UNDERSIGNED				DEBTS DUE BY UNDERSIGNED			
	Dollars	Cts.			Dollars	Cts.	
Cash (on hand and in banks) _____				Notes secured by chattel mortgages (list below) _____			
Notes due me (amount collectible) _____				Payable to above Bank _____			
Accounts due me (amount collectible) _____				Due _____ Secured by _____			
Feed on hand (list on other side) _____				(Describe Security) _____			
Live stock—market value (list other side) _____				Payable to _____			
Machinery and tools (list on other side) _____				Due _____ Secured by _____			
Ranch or farm lands (describe on other side) _____				(Describe Security) _____			
Improvements on ranch or farm (describe on other side) _____				Payable to _____			
Other lands (describe on other side) _____				Due _____ Secured by _____			
City real estate (describe on other side) _____				(Describe Security) _____			
Other assets (describe fully) _____				Notes due to above Bank—unsecured _____			
_____				Other notes due by me _____			
_____				Accounts due by me _____			
_____				Mortgages or liens on real estate owned (describe in space provided on other side) _____			
_____				Other debts (describe fully) _____			

_____				NET WORTH _____			
Total _____				Total _____			

Amount of the assets listed above which are exempt by law - - - - - \$ _____

Amount for which I am liable for partnership obligations (give details on other side) - - - - - \$ _____

Amount of the assets listed above, which are pledged to secure my debts - - - - - \$ _____

Amount for which I am liable on notes or accounts, not included in above statement, which have been transferred to banks or others - - - - - \$ _____

Amount of liability incurred by endorsement or guaranty to accommodate others - - - - - \$ _____

Amount of liability on bonds or unfinished contracts - - - - - \$ _____

Amount of insurance carried on feed \$ _____; on live stock \$ _____; on machinery, etc., \$ _____

on improvements \$ _____; on other assets \$ _____; and on my life \$ _____ in favor of _____

Number of years in present business _____ Number of years at present location _____

Number of acres leased from others _____ Date lease expires _____

Date to which lease is paid _____ Amount of yearly rent paid for leased land \$ _____

I solemnly declare and certify that the above statement, and schedules on opposite side are a true and correct account of the condition of my business on the day above stated.

Witness my hand, this _____ day of _____ 192____

WITNESS:

(Signature) _____

NOTE: If you have ever failed in business, attach a complete explanation and state basis of settlement with creditors. Fill Blanks on Other Side

Form C-5. Federal Reserve Bank of Dallas.

LIST OF REAL ESTATE AND IMPROVEMENTS OWNED, WITH INCUMBRANCES THEREON

(Listed in totals on other side)

Acreage or Dimensions	Location	Description of Improvements	Valuations		Mortgages or Liens		Title to Property in Whose Name
			Assessed	Actual	When Due	Amount	
			\$	\$		\$	

MACHINERY AND TOOLS

(Listed in total on other side)

	Wagons	Cultivators	Mowers	Threshers	Engines	Binders	Other Tools	Total Value
Number Present								
Value	\$	\$	\$	\$	\$	\$	\$	\$

FEED ON HAND

(List character of feed and market value)

	\$	\$
	\$	\$
	\$	\$

LIVE STOCK

(Listed in total on other side)

Number of Head	Breed	Market Value	Class of Stock (Registered, Graded or other)	
	Steers 1s at	\$ per head		\$
	Steers 2s at	\$ per head		\$
	Steers 3s at	\$ per head		\$
	Steers 4s and up at	\$ per head		\$
	Heifers 1s and 2s at	\$ per head		\$
	Cows at	\$ per head		\$
	Calves (19.....) at	\$ per head		\$
	Bulls at	\$ per head		\$
	Stallions at	\$ per head		\$
	Horses at	\$ per head		\$
	Colts at	\$ per head		\$
	Jacks at	\$ per head		\$
	Mules at	\$ per head		\$
	Mule Colts at	\$ per head		\$
	Sheep at	\$ per head		\$
	Lambs at	\$ per head		\$
	Goats at	\$ per head		\$
	Kids at	\$ per head		\$
	Hogs at	\$ per head		\$
	Pigs at	\$ per head		\$
	Other (describe) at	\$ per head		\$
TOTAL				\$

TO BE FILLED OUT IF LIABLE FOR ANY PARTNERSHIP OBLIGATIONS.

(This liability shown in total on other side.)

Name of partnership _____ Nature of business _____
 Value of partnership property \$ _____ Total of partnership debts \$ _____
 Give brief description of partnership property _____

 Name of partnership _____ Nature of business _____
 Value of partnership property \$ _____ Total of partnership debts \$ _____
 Give brief description of partnership property _____

APPENDIX H

THE CRÉDIT AGRICOLE OF FRANCE (1861) ¹

The Crédit Agricole is a joint-stock company created by the Crédit Foncier. It is under the same management as the Crédit Foncier and dependent upon it. The Crédit Agricole was chartered by the decree of February 16, 1861, and began operations April 1 of the same year.

The aims of the Crédit Agricole are: To procure capital or credit for agriculture and the industries connected with it, by making or facilitating by its guaranty the discount or negotiation of effects payable at the latest in ninety days; to open credits or loans for a longer period, but without exceeding three years on pledge (*nantissement*) or any other special security; to receive deposits with or without interest, not exceeding twice the capital in cash or represented by securities placed in the company's safe; to open running accounts, make collections, to carry on, with Government sanction, all other operations which aim at helping the clearing and improvement of the soil, *et cetera*, and the development of agriculture.

It is clear from the aims of the Crédit Agricole that one of its chief purposes was the betterment of agriculture by lending capital and credit for a relative long term to be used for agricultural improvements and equipments. Besides this special joint-stock company which aids agriculture by supplying capital and credit for fixed betterments along with other purposes, the Crédit Foncier's loans on mortgage security may be used for these purposes, or at least there is nothing in the laws governing the organization which would expressly prohibit such use of the loans. Much of this kind of credit is also handled by joint-stock banks, mutual coöperative credit societies and other banking and credit organizations of a local nature.

¹ La Loi du.

APPENDIX I

COÖPERATIVE PEOPLES' BANKS IN THE AGRICULTURAL DISTRICTS OF CANADA ¹

It is of the highest importance that the farmers should be organized as are other classes of the community, and the first step toward this end is an institution that will afford these tillers of the soil the capital they need to improve their industry. They should not be frightened at an innovation by those so-called wise men who exaggerate prudence and who, as a matter of fact, are the victims of their own intellectual deformity or of a deplorable professional prejudice which causes them to look at any new step with fear or bias. Obviously, wisdom is necessary, but audacity coupled with thoughtfulness and prudence is also the key to progress. These men always want to see "how the enterprise will turn out" before taking part in any movement even if it has sustained the test of experience. We have met a good many of these unfortunate human beings who are always behind the rest of the population but who believe themselves to be leaders.

As a whole our countrymen are in sympathy with progress based upon wisdom and do not, thank God, fear to take upon themselves the responsibility that it involves. That our rural population is endowed with intelligence is apparent by the number of coöperative banks which are now working with great success among industrious and honest farmers.

St. Ulric in the County of Rimouski, situated along the shores of the St. Lawrence, is a parish having a population of about 1,600, all farmers. A coöperative bank was organized on September 26, 1909, and in 37 months it has accumulated assets of \$24,460.38 and its general business had reached the rather startling figure of \$116,817.86, of which there have been loans amounting to \$73,530.05. Not a cent has been lost on those

¹ Excerpt from the Coöperative Peoples' Bank—La Cassie Populaire by Alphonse Desjardins, 1914, pp. 33-36.

loans. The dividends paid amounted to \$632, and interest on deposits to \$562. The reserve or guarantee fund stands at \$664, representing almost 10 per cent of the share capital paid in.

Armagh, in the County of Bellechasse, has a population of about 1,400, all farmers. The bank there was organized on February 13, 1910, and on December 31, 1912, after a lapse of 35 months, the assets amounted to \$27,138.23 and the turnover, the enormous figure of \$356,686.03; the loans, \$37,643.58. The dividends paid on shares amount to \$400.68; the interest on deposits to \$533.79, while the guarantee fund stands at \$701.82, or more than 12 per cent of the amount paid in upon shares. To give an idea how small is the cost of management, it will be sufficient to state that the whole expenses incurred were but \$173.49 for Armagh and for St. Ulric, \$168.27.²

The parish bank of St. Maurice of Champlain, an exclusively rural parish, was founded August 1, 1909. Its assets on November 30, 1912, were over \$54,000 and its general turnover for the period of 40 months had reached the enormous sum of \$424,000 in round figures, although the population of the whole parish does not exceed 1,000.

Maria, in the county of Bonaventure, is a small parish situated on the shores of the Bay des Chaleurs, near the Gulf of St. Lawrence. Its population is about 800. The majority are farmers, but a good number of families are still living on what was the only industry in that place in years gone by—fishery. The coöperative bank was organized there on September 13, 1908, and on November 30, 1912, the assets were \$20,485.06, and the general business done in those four years had reached the amount of \$49,294.36, of which \$29,625.91 had been for loans. Interest paid on deposits amounted to \$468.51; dividends on shares to \$334.48; and the total expense for the four years to \$530.67. It must be stated here that the population is poor and it is a wonder to every one who knows the locality that such splendid results could have been achieved in so short a period.

² By way of illustrating the continuous and rapid growth of these banks, especially in farming communities, the report of the Armagh bank on May 31, 1914, is given: Assets, \$79,749; general turnover, 568,653; loans, 123,060; dividends paid, \$1,209; interest paid on deposits, \$1,930; guarantee fund, \$1,673. While all of these items showed a large increase, expenses increased to only \$225, an increase of barely \$52.

Let us now take up still smaller parishes, where fortunately, energetic and enterprising citizens are to be found, and we will see still better results considering the number of people.

St. Jean des Piles with a population of 800, part of whom are laboring men and the rest very small farmers, is situated in a rather poor agricultural county at the foot of the Laurentian Mountains in the district of Three Rivers, half way between Montreal and Quebec. Its coöperative bank was organized on August 22, 1910, and on September 30, 1912, in 25 months, it had accumulated assets of \$11,972.60, and its general turnover amounted to \$60,378.49; loans, \$36,236.77; interest paid on deposits, \$308.86; dividends on shares, \$172.42; guarantee fund, \$354.77; savings deposits, \$30,551.56; withdrawals, \$21,683.64. The total expenses were \$224.30.

The total number of loans was at that date, 459, divided into very small loans: i.e., loans of \$10 and less, 44; from \$10 to \$20, 76; from \$20 to \$30, 86; from \$30 to \$40, 48; from \$40 to \$50, 40; from \$50 to \$60, 20; from \$60 to \$75, 24; from \$75 to \$100, 30; from \$100 to \$150, 37; from \$150 to \$200, 20; from \$200 to \$300, 19; from \$300 to \$500, 12, and from \$500 upward, 2. There has even been a loan of \$1,000, making a grand total of \$36,236.77.

St. Joseph, situated to the extreme west of the Province of Quebec, in fact the last parish on the west, is mainly inhabited by poor settlers. The total population is about 1,400, out of which there are 500 to 600 Indians. The parish bank was organized on October 22, 1911, and on January 31, 1913, the assets were \$8,225.94; the general turnover, \$34,829.91; total loans, \$16,805.77; savings deposits, \$23,240.55; withdrawals, \$16,964.11; interest paid on deposits, \$102.96; dividends, \$23.80; general expenses, \$45.00; guarantee fund, \$51.42.

St. Onesime of Kamouraska is a very small parish inhabited mostly by farmers and settlers who have to work in the shanties of the lumbermen part of the year to supplement their poor agricultural earnings. When we were invited to organize a bank there the priest asked us if his parish was not too small for such a venture. We answered no, and went there to organize the bank in May, 1912. On December 31, 1912, the assets were \$2,913.80; savings deposits, \$3,322.51; the general turnover had

been \$3,938.29; the amount loaned out, \$571; withdrawals, \$975.99.

For a number of the above-mentioned parish banks we have given the amounts of savings deposits received and withdrawn, but we could have noted the same facts for every one of the 150 now in operation, as they all carry on the savings business with equal success. For instance, the Levis Coöperative People's Bank up to January 31, 1913, had received savings deposits amounting to \$549,699.34, and had reimbursed \$493,490.57, leaving on that date a balance of \$56,208.77."

APPENDIX J

RAIFFEISEN BANKS

The birthplace of rural coöperative banks is in Germany. Herr F. W. Raiffeisen, burgomaster of a group of villages round Neuwied, was the pioneer promoter in this field. In 1848 he founded at Weyerbusch (Coblenz) a coöperative society for distributing potatoes and bread to the poor. The next year he founded at Flammersfield in the Westerwald a loan society for the support of unprovided farmers; the members were not the farmers themselves, but rather wealthy philanthropic persons who sold cattle on easy terms to the unorganized farmers. In 1862 he founded another loan society at Anhausen, in which the borrowing farmers were themselves the members. He also observed that the poor did not need donations of money, but the organization to command this money for themselves.

Raiffeisen took considerable time to work out his plan of rural credit. At first he planned a dual system as laid down in the first edition of his work, "Die Darlehenskassenvereine,"¹ loan societies of 1866, employing the Anhausen model in purely agricultural districts and the model of the Hoddesdorfer society, which had share capital. Share capital did not please Raiffeisen. By 1873 he had determined to cling to the Anhausen model which is known as the "Raiffeisen bank." In 1877 a general union was established which in 1899 was named the "General Verband Landlicher Genossenschaften" or the General Union of Rural Coöperative Societies.

The object of the Raiffeisen banks is stated in the model rules as follows:

"The object of the society is to improve the situation of its members both materially and morally, to take the necessary steps for the same, to obtain through the common guarantee the necessary capital for granting loans to members for the development of their business

¹ MULLER, DR. F., Die geschichtliche Entwicklung des lands. Gen. wesens in Deutschland, espec. Section 2, 1901.

and their household, and to bring idle capital into productive use, for which purpose a savings bank will be attached to the society."

Raiffeisen, himself, was a devoted Christian and he insisted that all the members of his societies should be. He used especially the leading intelligent power which was at this time available in the rural districts, the parish priest or pastor. With their help he was able to stir the peasant and bring about practical coöperative results through their neighborly affection.

The bank has practically no subscribed capital; it has only the universal unlimited liability of its members. Raiffeisen did not feel that he needed share capital as each member possessed in his little farm, his cattle or implements, material guarantee which was entirely adequate. Also the avoiding of shares helped him to avoid the usual difficulty of share banks which is to make money for a few stock holders. On the other hand, these banks are run strictly for the mutual benefit of their members. Unfortunately, however, a law was passed 1889 which required that every coöperative society should have shares. The Raiffeisen banks comply with nominal shares on which no dividends are declared, although occasionally some of the profits are returned to members in the shape of addition to deposits and a deduction from loan charges.

Raiffeisen limited the size of each society to a single village. The reason for this is fundamental—that is, he wished to create credit among small agriculturists out of mutual knowledge.

All profits not otherwise used remain the property of the society. The profits are usually divided into two classes—reserve fund and foundation fund. The money in the reserve fund can be withdrawn to cover losses only, but the foundation fund can be used for positive improvements, such as the extension of premises and the like.

The loan capital is made up of the small savings and deposits. This comes from two sources—members and non-members. The members are all within the limited area. The non-members may be either in or out of the bank area. Any sum in savings is received from one mark upward. These savings are willingly brought to the bank and their accumulations have been very surprising. It is said that no one has ever lost his

savings through one of these little banks by bankruptcy. In addition to these sources the bank obtains credit from a central bank with which it has a current amount.

Each province in the Haas organization has its own central bank (Provinzial-Kasse) and its own central society for supply and sale (Haupt-Genossenschaft). Then the Raiffeisen organization has for the whole of Germany one central bank (Central-Darlehens-Kasse), containing non-credit departments, at its headquarters in Neuwied. They are all controlled by the one central society.

The funds obtained from the central bank are used for simple loans, current accounts, and property transfers. Loans are secured by personal pledge, land mortgage, or deposit of collateral. The personal pledge is the most common security. However, the credit-seeker must produce evidence of good character and merit. He must also be known in his daily life to be sober and industrious. In cases where borrowers are little known but the society is convinced of their good character, loans are advanced on the security of land mortgages. This is not considered real credit but personal credit with material security. No loans of this sort, however, are made except on first mortgage security.

The society also requires to know the purpose for which the loan is to be used. The purpose intended by the borrower must appear likely to be successful or no loan will be granted.

The local banks also handle property transfers. But this is not strictly a credit business and we shall not give space for it in this work.

A Raiffeisen bank is usually a small room, often in a farm building. It is open twice a week and directed by one individual. Accounts of small savings and large alike are accepted. But the small savings are most common. The directors meet once a week to discuss the various credit claims. They are unpaid. The accountant or clerk is the only salaried officer.

The results achieved by these rural banks may be indicated by the following digest:²

² Jahrbuch des Reichs-Verb. (edited by Dr. Haas) 1905, p. 13 (adapted from Coöperation at Home and Abroad, by C. R. Fay, pp. 48-49; London School of Economics, 1908).

In 1905 the number of banks amounted to 13,181, being an increase of nearly 800 per cent on the 1,729 banks existing in 1890. The statistics which follow apply only to the 10,786 banks which are included in the central organization of the Imperial Union, the remainder being small, loosely organized institutions without proper figures. While 1,020 town banks, with 586,595 members and an average membership of 575, grant credit up to (in round figures) 3,000,000,000 marks; 10,786 country banks with 954,473 members and an average membership of 88, grant credit up to 5,000,000,000 marks. Thus more than ten times the number of country banks only grant one-sixth of the credit afforded by the town banks. The total membership of the country banks is nearly twice as large, but the average membership per bank is nearly seven times as small.

The average credit advanced per member is 500 marks. The average size of the definite loan is slightly below this. The average rate of interest is not exactly known; it appears to be between 4 and 5 per cent, i.e., nearly one per cent cheaper than in the town banks. The duration of loans varies between one and ten years in accordance with the requirements of agriculture. They are repayable in small installments, covering principal and interest, although the member may repay in lump if he wishes. The loan can always be called on four weeks' notice, but the right is never exercised, unless the borrower is allowing his property to deteriorate or is becoming insolvent through extravagance or has misapplied money lent for a particular purpose. The inculcation of punctuality in payment as a moral duty was the hardest of Raiffeisen's tasks, as it was his greatest triumph.

"About an hour's walk from Neuwied on the Rhine is situated, on a plateau bordering the Westerwald, the little village of Anhausen. The district is not very fertile and the inhabitants are mostly small peasant proprietors, some with only sufficient land to graze a single ox or cow. An owner of ten acres is a rich man. Before the year 1862 the village presented a sorry aspect; rickety buildings, untidy yards, in rainy weather running with filth, never a sight of a decently piled manure heap, the inhabitants themselves ragged and immoral, drunkenness and quarreling universal. Houses and oxen belonged with few exceptions to Jewish dealers. Agricultural implements were scanty and dilap-

idated, and badly-worked fields brought in poor returns. The villagers had lost confidence and hope, they were the serfs of dealers and usurers. To-day Anhausen is a clean and friendly-looking village, the buildings well-kept, the farmyards clean even on work days; there are orderly manure heaps on every farm. The inhabitants are well if simply clothed, and their manners are reputable. They own the cattle in their stalls. They are out of debt to dealers and usurers. Modern implements are used by nearly every farmer, the value of the farms has risen and the fields, carefully and thoroughly cultivated, yield large crops." ³

³ Translated from A. WUTTIZ, "F. W. Raiffeisen," p. 71. (Verified and adapted from Coöperation at Home and Abroad by C. R. Fay, pp. 48, 50. London School of Economics, 1908.)

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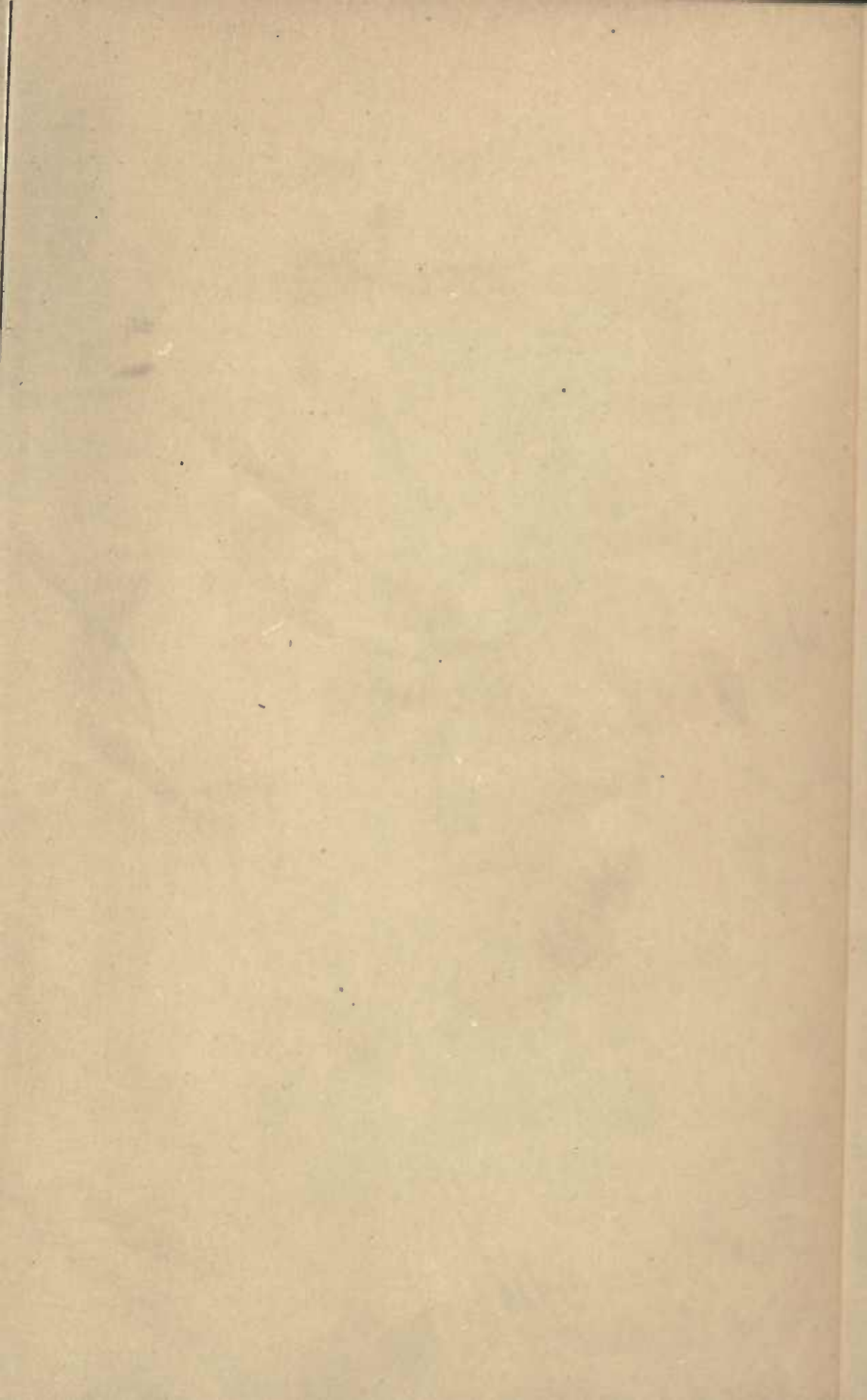
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